

FOR INFORMATION ONLY

AmerGen

TMI - Unit 1
Emergency Procedure

Number

EPIP-TMI-.07

Title

Activation of the RAC

Revision No.

8

Applicability/Scope

USAGE LEVEL

Effective Date

All TMI RAC Emergency Response Personnel

2

OCT 20 2000

This document is within QA plan scope

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No

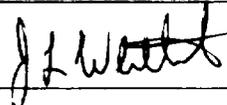
Safety Reviews Required

<input checked="" type="checkbox"/>	Yes
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No

List of Effective Pages

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	Signature	Date
Originator	J. L. Whitehead 	10/18/2000
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Approver	/s/ N. Brown	10/09/00

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1.0 **PURPOSE**

The purpose of this procedure is to provide guidelines for the Radiological Assessment Coordinator (RAC) to activate the radiological assessment function.

2.0 **APPLICABILITY/SCOPE**

This procedure is applicable to the TMI Radiological Assessment Coordinator and Radiological Support Personnel.

3.0 **DEFINITIONS**

None

4.0 **RESPONSIBILITIES**

4.1 The on-shift RAC is responsible for implementing Exhibit 1.

4.2 The Initial Response Emergency Organization (IREO) (RAC) is responsible for implementing Exhibit 2.

4.3 Radiological Support Personnel are responsible for implementing Exhibits 3 through Exhibits 6.

5.0 **PROCEDURE**

5.1 This procedure is to be initiated upon declaration of any Emergency Classification specified in the Emergency Plan or when directed by the Emergency Director.

5.2 Emergency Actions

NOTE

The steps in this section are based on the expected sequence of activation of the RAC. The actual sequence should be based on when qualified personnel arrive in the facility.

A. The on-shift RAC shall activate the radiological assessment function by reporting to the Control Room and performing the steps in the on-shift RAC checklist (Exhibit 1).

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_____ B. The IREO RAC shall relieve the on-shift RAC and direct the radiological assessment function by assigning appropriate personnel to assume those positions and perform the actions listed for those positions as follows (in the absence of appropriate personnel, the Radiological Assessment Coordinator shall assume these positions and perform the essential actions for those positions):

- _____ • Radiological Assessment Coordinator (RAC):
Report to Emergency Control Center and perform the RAC Checklist (Exhibit 2).
- _____ • Radiological Engineering Support:
Report to the Emergency Control Center and complete the Radiological Engineering Support Checklist (Exhibit 3).
- _____ • Radiological Line Communicator (RAC Support Staff):
Report to the Emergency Control Center and complete the Radiological Line Communicator Checklist (Exhibit 4).
- _____ • RAC/OSC Communicator (RAC Support Staff):
Report to the Emergency Control Center and complete the RAC/OSC Communicator Checklist (Exhibit 5).
- _____ • Field Team Communicator (RAC Support Staff):
Report to the Emergency Control Center and complete the Field Team Communicator Checklist (Exhibit 6).

5.3 Final Conditions

_____ 5.3.1 The radiological assessment function is operational with the desired positions manned and functional. Communications are established.

5.4 Post Event Actions

_____ 5.4.1 An inventory of the RAC Area of the ECC is required to be performed by the end of the workday following the end of the event. The inventory is the responsibility of Rad Con Field Operations. Notify the Manager, Rad Con Field Ops. of the need to perform the inventory in accordance with Procedure TEP-ADM-1300.01, Maintaining Emergency Preparedness.

6.0 **REFERENCES**

- 6.1 TMI Emergency Plan
- 6.2 TMI Emergency Plan Implementing Procedures
- 6.3 6610-PLN-4200.02, Emergency Dose Calculation Manual (EDCM)

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7.0 **EXHIBITS**

- Exhibit 1 - On-Shift RAC Checklist
- Exhibit 2 - IREO Duty Roster RAC Checklist
- Exhibit 3 - Radiological Engineering Support Checklist
- Exhibit 4 - Radiological Line Communicator Checklist
- Exhibit 5 - RAC/OSC Communicator Checklist
- Exhibit 6 - Field Team Communicator Checklist
- Exhibit 7 - Field Team Data Collection

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On-Shift RAC Checklist

- 1.0 The On-Shift RAC should perform the following until relieved by the IREO RAC or by a more senior qualified individual. This checklist need not be completed by the On-Shift RAC prior to turnover per Step 1.11.

NOTE

The **bold underlined** steps below are particularly important in the early stages of an emergency. They should be performed promptly and in an orderly manner.

- 1.1 **Energize the RAC Computer.**
- 1.2 **Start a log** of activities performed.
- 1.3 **Call out additional resources** if they are needed. If no additional resources are needed at this time, skip the step but reconsider it later as needs change.
 - 1.3.1 For the duty roster RAC, determine from the Emergency Director (ED) if the duty roster has been called out. If not, get the RAC's phone number from the ED and call him/her.
 - 1.3.2 For call-out of additional R.C. Techs, obtain (or have someone obtain) phone numbers from the Rad Con Field Ops phone list and call (or have someone call) the needed techs.
- 1.4 **Determine release pathway.** Consult with the ED or his/her designee to determine the pathway of any radioactive releases from the plant.

NOTE

Refer to the Emergency Dose Assessment User's Manual section of the EDCM located in the RAC locker for guidance in performing dose projections.

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- 1.5 **Obtain and validate the initial dose projection within 15 minutes.**
- 1.5.1 **Select the RAC Spreadsheet** icon from the desktop of the RAC Computer.
- 1.5.2 **Go to the release pathway** specified by the ED.
- 1.5.2.1 Select the Update Plant Data option to import PPM and Met Data.
- 1.5.2.2 If the pathway is being monitored by an RMS monitor, use the RMS option for that pathway.
- 1.5.2.3 If the pathway is not being monitored by an RMS monitor, use the leak rate option for that pathway.
- 1.5.2.4 Verify that the PPM and Met Data is current (15 minutes old or less). If not, all data will need to be input manually.
- 1.5.2.5 Enter data not available from the PPM as specified by the input sheet.
- 1.5.2.6 Edit any PPM or Met Data that is not believed to be accurate.
- 1.5.2.7 Print dose projection.
- 1.5.3 **Validate the dose projection** by performing the following checks:
- Verify that the correct release pathway is being used.
 - Verify that the monitor input data is accurate and appropriate (e.g. no calibrations in progress).
 - Verify the release duration with the ED.
 - Verify that the dose projection results are consistent with other indications.
- 1.5.4 **Use the Total Dose Option** to verify no other pathways are contributing to the offsite dose.
- 1.5.5 **If power is lost to the RAC computer**, request assistance from Operations in obtaining power. An extension cord is available in the RAC locker.
- 1.6 **Review the dose projection with the ED.** Ensure the ED understands the nature of the dose projection (e.g. bounding calculation, contingency projection, "what-if", etc.) and the precision or uncertainty associated with the dose projection..
- 1.7 **Review the Emergency Classification with the ED** as it relates to current radiological parameters and evaluate the need to escalate to a higher classification.

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1.8 **Advise the ED on any of the following** issues if they apply. Skip any that do not apply but reconsider them as the emergency conditions change.

- Protective Action Recommendations (PAR) (see the PAR logic diagram in procedure EPIP-TMI-.02, Emergency Direction, available from the ED).
- On-site assembly and site evacuation of non-essential personnel (see the table at the end of this exhibit for guidance).

NOTE

The automated Emergency Report Form that is produced by ED automatically suggests assembly location and evacuation routes contained on the table in this exhibit.

- Contaminated and/or injured employees and any decontamination efforts.

1.9 **Consider dispatching a field monitoring team** if the dose projection indicates the potential for abnormal radiological conditions off-site.

1.9.1 To activate field teams:

- Perform radio checks with the field team(s).
- Assign and record field team designations (e.g. Alpha, Bravo, etc.)
- Obtain and record names and SSN's for all field team members.
- Obtain and record year-to-date TEDE for all field team members.
- Inform team members of the current wind direction and speed and display it on the EPZ map.

1.9.2 **Field monitoring team placement and direction:** consider the following guidelines for placing and directing field team(s).

- A. For ground level releases (highest doses projected at site boundary) -
- Place the first field team downwind at the site boundary.
 - Place the second team (if dispatched) off-site, downwind and as near to the site as possible.

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- B. For elevated releases (highest doses projected at some distance from the site) -
 - Place the first field team downwind at the location where the highest dose is projected.
 - Place the second team (if dispatched) downwind nearer to the site than the first team (results from this team aid in determining if the plume touched down closer than projected).
- C. Instruct the team(s) to scan across the plume and attempt to locate plume centerline.
 - Provide a definite start point, direction of travel and an end point for scanning (e.g. "scan for plume centerline starting at NNE31, travel toward the Southeast passing through NE31 and continue to ENE31").

1.10 **BRP call back:** Within 45 minutes of event declaration notify the ECC Communications Coordinator whether the BRP has called back to the RAC.

1.11 **Provide a turnover to the IREO RAC** upon arrival.

**EXHIBIT 1
On-Shift RAC Checklist**

**Guidelines for Selection of On-Site Emergency Assembly Area
and Evacuation Route for Non-Essential Personnel**

Wind Direction (from)	On-Site Emergency Assembly Area To Use	Route to Emergency Assembly Area	Gate To Be Used For Site Evacuation	Off-Site Remote Assembly Area To Be Used For Site Evacuation
1° to 80°	Warehouse 1	<p>Personnel in the NOB, OSF, Protected Area and other locations near Unit 1 use most direct route to Warehouse 1.</p> <p>Personnel in the Unit 2 Admin Bldg, Bldg 222, Transportation and other locations near Unit 2 travel by personal vehicle to Warehouse 1.</p>	North Gate	Training Center
81° to 170°	Warehouse 3	<p>Personnel in the NOB, OSF, Protected Area and other locations near Unit 1 walk to Warehouse 3 via the East side of the plant.</p> <p>Personnel in the Unit 2 Admin Bldg, Bldg 222, Transportation and other locations near Unit 2 use most direct route to Warehouse 3.</p>	North Gate	Training Center
171° to 240°	Warehouse 3	<p>Personnel in the NOB, OSF, Protected Area and other locations near Unit 1 should go directly to their personal vehicles and drive to the parking lot south of the Unit 2 Admin Bldg and then walk to Warehouse 3.</p> <p>Personnel in the Unit 2 Admin Bldg, Bldg 222, Transportation and other locations near Unit 2 should use the most direct route to Warehouse 3.</p>	South Gate	Training Center
241° to 320°	Warehouse 1	All site personnel should take the most direct route to Warehouse 1.	North Gate	Training Center or EOF (see Note)
321° to 360°	Warehouse 1	All site personnel should take the most direct route to Warehouse 1.	North Gate	Training Center

NOTE

Use the Training Center as the Off-Site Remote Assembly Area unless the Dose Projection between the Exclusion Area Boundary and 1 mile is greater than 5 mREM/hr CDE or 1 mREM/hr TEDE.

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IREO Duty Roster RAC Checklist

1.0 **The IREO RAC should perform the following upon reporting to the Emergency Control Center:**

- _____ 1.1 **Obtain a turnover** from the On-Shift RAC if staffed. If the on-shift RAC position was not staffed skip to Step 1.2.
- _____ 1.2 **Review Exhibit 1 and ensure applicable steps have been implemented.**

NOTE

The following steps should be considered and, if needed, implemented. These steps need not be performed in the sequence listed and may be performed multiple times. The RAC should periodically review this checklist to ensure that necessary steps are being performed.

- _____ A. **Assign personnel to staff positions** described in Exhibits 3 through 6.
- B. **Maintain a log** of activities performed.
- C. **Refer to the Emer. Dose Assessment User's Manual** contained in the EDCM (Ref. 6.3) for dose assessment guidance.
- D. Review dose projections with the ED.
 - Ensure the ED understands the nature of the dose projection (e.g. bounding calculation, contingency projection, "what-if", etc.) and the precision or uncertainty associated with the dose projection.
- E. Advise the ED on:
 - Protective Action Recommendations (PAR) (see the PAR logic diagram in procedure EPIP-TMI-.02, Emergency Direction, available from the ED)
 - On-site assembly and site evacuation of non-essential personnel (see the table at the end of this exhibit for guidance).
 - Radiological conditions:
 - In-plant (including habitability concerns in emergency facilities),
 - On-site and
 - Off-site
 - Employee doses and emergency dose extensions.
 - Contaminated employees, decontamination efforts and any use of Thyroid Blocking agent.

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- F. **Emergency classifications:** Recommend emergency classifications to the ED based on radiological conditions and Emergency Action Levels (EAL).
- G. **Fuel damage assessment:** Provide any necessary assistance to the TSC for the assessment of fuel damage and report results to the ED.

NOTE

While the RAC should provide assistance to the TSC in assessing the degree of core damage, the 'official' damage assessment values will be determined by the TSC.

- H. **Primary to secondary leak rate determination:** If a primary to secondary leak exists, use the Emer. Dose Assessment User's Manual contained in the EDCM (Ref. 6.3) to assist in determining primary to secondary leak rate. Coordinate with the TSC in making this determination.

NOTE

While the RAC should provide assistance to the TSC in estimating the primary to secondary leak rate, the 'official' leak rate values will be determined by the TSC.

- I. **Field monitoring teams:** consider the following guidelines for directing field monitoring team(s).
 - For releases that are predominantly ground level-
 - Place a field team downwind at the site boundary.
 - Place another team off-site, downwind and as near to the site as possible.
 - For releases that are predominantly elevated-
 - Place a field team downwind at the distance at which the dose projection shows the highest dose.
 - Place another team downwind nearer to the site than the other team (results from this team aid in determining if the plume touched down closer than projected).
 - Teams should start by scanning for plume centerline. Upon locating plume centerline they should obtain dose rates (open and closed window) and an air sample.

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- Monitor field monitoring team doses. If field monitoring team thyroid doses are projected to be 25 REM (CDE) or greater:
 - Request permission from the Group Leader- Rad. & Env. Controls to authorize field monitoring teams to self-administer thyroid blocking agent.

NOTE

Instructions for field monitoring team use of thyroid blocking agent are contained in procedure, EPIP-TMI-.10, Onsite/Offsite Radiological/Environmental Monitoring.

- Advise field monitoring teams to utilize respiratory protection to the extent practical without compromising their safety.
 - Once the EACC is operational, coordinate the placement of field monitoring teams with the EAC.
 - Transfer responsibility for off-site field monitoring team(s) to the EACC when they are ready to assume that responsibility.
- J. **Dose projection/field readings comparison:** use the following guidance for comparing field readings (field team or Reuter Stokes readings) and dose projections.
- If field readings are within a factor of 10 less than (and not more than) the corresponding projected value, a very good correlation exist between the two.
 - Field iodine sample results, after being converted to thyroid dose rate (CDE per hour), can be directly compared to MIDAS projected thyroid dose rate.
 - Field team closed window dose rates and Reuter Stokes readings can be compared with DDE values in dose projections.
 - There is no dose projection value that corresponds directly to field team open window readings. Open window readings that are higher than closed window readings indicate that the plume is at ground level at that location.
- K. **Samples:** Consider the need for special samples (e.g. MAP-5, CATPASS, RCS-PAS) to provide more precise source term data for dose projections.
- Samples taken directly from the effluent pathway (e.g. condenser off-gas, MAP-5, etc) provide the most precise source term data.
 - A sample from the Reactor Building atmosphere (i.e. CATPASS) will improve the precision of source term data for releases from the Reactor Building but will likely be less precise than effluent samples.

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- RCS sample results are useful in determining the extent of fuel damage and can be used to improve the precision of the source term but to less an extent than effluent samples.

NOTE

The Emer. Dose Assessment User's Manual contained in the EDCM (Ref. 6.3) provides guidance on which sample(s) to obtain under various conditions.

- _____ L. **Communication with BRP:** Establish communication with the Bureau of Radiological Protection (BRP) and provide TMI dose projections to them.
- _____ M. **Communication with NRC:** If the NRC requests continuous communication on the Health Physics Network (HPN), establish and maintain communication on the HPN with them and:
 - Assign an extra RAC staff member as soon as one is available or,
 - Request an additional communicator from the ED Assistant.
- N. Coordinate all Radiological Controls activities on-site, including:
 - Access control to areas affected by the emergency.
 - Personnel dose monitoring and control (including dose extensions).
 - In-plant surveys and samples.
- O. **Thyroid Blocking:** Implement the Thyroid Blocking procedure (EPIP-COM-.44) if it is anticipated that person(s) will be exposed to quantities of radioiodine sufficient to cause a thyroid dose of 25 REM (CDE) or greater.
 - **Field Monitoring Teams:** If field monitoring team thyroid doses are projected to be 25 REM (CDE) or greater, authorize team members to self-administer thyroid blocking agent. Instructions for field monitoring team use of thyroid blocking agent are contained in procedure: EPIP-TMI-.10, Onsite/Offsite Radiological/ Environmental Monitoring.
- P. Interface with the Group Leader- Radiological and Environmental Controls (GL-R&EC) regarding:
 - Dose projections
 - In-plant and on-site conditions
 - Protective actions

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- Q. **Recommend source term reduction techniques** appropriate to the release pathway (e.g. RB spray, raising OTSG levels, etc). See the Emergency Dose Assessment User's Manual in Ref 6.3 for specific information.

- R. Evaluate the need for eating and drinking restrictions in-plant.
 - If results of habitability monitoring allow, recommend that the E.D. lift restrictions, as needed.
 - Ensure habitability monitoring continues.

- S. **Review radiological information in press releases.** Specific examples of radiological information that should not be included in press releases are:
 - Dose projections
 - Protective action recommendations
 - Technical terms
 - Acronyms and abbreviations

- T. Trend effluent release data, RMS, sample results, field team readings and dose projections.

- U. **Establish a watch bill** to cover the RAC and all staff positions on a 24 hour-per-day basis.

EXHIBIT 2
IREO Duty Roster RAC Checklist

**Guidelines for Selection of On-Site Emergency Assembly Area
and Evacuation Route for Non-Essential Personnel**

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81° to 170°	Warehouse 3	Personnel in the NOB, OSF, Protected Area and other locations near Unit 1 walk to Warehouse 3 via the East side of the plant. Personnel in the Unit 2 Admin Bldg, Bldg 222, Transportation and other locations near Unit 2 use most direct route to Warehouse 3.	North Gate	Training Center
171° to 240°	Warehouse 3	Personnel in the NOB, OSF, Protected Area and other locations near Unit 1 should go directly to their personal vehicles and drive to the parking lot south of the Unit 2 Admin Bldg and then walk to Warehouse 3. Personnel in the Unit 2 Admin Bldg, Bldg 222, Transportation and other locations near Unit 2 should use the most direct route to Warehouse 3.	South Gate	Training Center
241° to 320°	Warehouse 1	All site personnel should take the most direct route to Warehouse 1.	North Gate	Training Center or EOF (see Note)
321° to 360°	Warehouse 1	All site personnel should take the most direct route to Warehouse 1.	North Gate	Training Center

NOTE

Use the Training Center as the Off-Site Remote Assembly Area unless the Dose Projection between the Exclusion Area Boundary and 1 mile is greater than 5 mREM/hr CDE or 1 mREM/hr TEDE.

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Radiological Engineering Support Engineer Checklist

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1.0 **Perform the following:**

NOTE

The following steps should be considered and, if needed, implemented. These steps need not be performed in the sequence listed and may be performed multiple times. The RESE should periodically review this checklist to ensure that necessary steps are being performed.

- A. **Start a log** of activities performed.
- B. **Perform dose projections** using the RAC computer.
 - **Refer to the Emergency Dose Assessment User's Manual** contained in the EDCM (Ref. 6.3) for guidance.
 - **Validate dose projections.** Perform the following checks in coordination with the RAC:
 - Verify that the correct release pathway is being used.
 - Verify that the monitor input data is accurate and appropriate (e.g. no calibrations in progress).
 - Verify the release duration.
 - Verify that the dose projection results are consistent with other indications.
 - Verify that the dose projection is not more than 15 minutes old.
 - **If power is lost to the RAC computer,** request assistance from Operations in obtaining power. An extension cord is available in the RAC locker.
 - **COLA host reboot:** If the automated dose projection system host computer (COLA host) is "locked up," reboot it as follows:
 - Dial the COLA computer's reboot device at extension 8297.
 - When the reboot device answers and states "please enter your access code," enter "1979".
 - The reboot device will then state "power is on" or "power is off."

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- To reboot the COLA:
 - Press "2" (the reboot device will state "power is off").
 - Press "1" (the reboot device will state "power is on").
- Hang up the phone. The host computer will begin rebooting immediately. The process may take up to 15 minutes.

- C. **Determine and log the time of reactor shut down.**
- D. **Communicate with the GL-R&EC and the EACC.**
- E. **Trend dose projections.**
- F. **Generate source term data:** Edit input parameters and input sample results to refine the source term.
- G. **Met. and forecast data:** Obtain current meteorological data and weather forecast data (short and long term) from the EACC for:
 - Dose projections (e.g. "what if" projections)
 - Plume tracking
 - Site evacuation planning
 - Off-site protective action planning
- H. Evaluate the following inputs to verify that dose projections reflect actual conditions:
 - Plant conditions
 - RMS data
 - RCS activity
 - Spiking factors
 - Meteorological data.
- I. **Confirm dose projections** by comparing with field team readings and/or Reuter Stokes readings.
 - If field readings are within a factor of 10 less than, and not more than, the corresponding projected value a very good correlation exists.
 - Field iodine sample results, after being converted to thyroid dose rate (CDE per hour), should only be compared to MIDAS projected thyroid dose rate.
 - Field team closed window dose rates and Reuter Stokes readings can be compared with DDE values in dose projections.
 - There is no dose projection value that corresponds directly to field team open window readings. Open window readings that are higher than closed window readings indicate that the plume is at ground level at that location.

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- J. **Discuss Protective Action Recommendations (PAR) and Protective Action Guidelines (PAG) with the RAC.**
- The PAR logic diagram is contained in procedure EPIP-TMI-.02, Emergency Direction, available from the ED.
- K. **Perform "what if" dose projections based on potential or anticipated:**
- Plant status changes
 - Meteorological changes
- L. **Coordinate with the TSC.** Assist the RAC in coordinating with the TSC for:
- **Primary to secondary leak rate determination.** Use the Emergency Dose Assessment User's Manual (Ref. 6.3) for guidance.
 - **Fuel damage class determination.**
 - The TSC will produce the "official" damage class value.
 - Provide input using the guidance in Emergency Dose Assessment User's Manual (Ref. 6.3).
 - Update dose projection system as appropriate.

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Radiological Line Communicator Checklist

1.0 Perform the following:

NOTE

The following steps should be considered and, if needed, implemented. These steps need not be performed in the sequence listed and may be performed multiple times. The Radiological Line Communicator should periodically review this checklist to ensure that necessary steps are being performed.

- A. Maintain a log of information sent and received.
- B. Communicate with the following:
 - Group Leader - Radiological and Environmental Controls (GL-R&EC) at the EOF
 - Bureau of Radiological Protection (BRP)
 - Nuclear Regulatory Commission (on the HPN line).
- C. Provide a briefing on current plant status and recent changes to all persons on the Radiological Line.
- D. Pass requests from the RAC for off-site support to the EOF. Examples are:
 - Rad Con Technicians from other plants.
 - Equipment (e.g., radiation monitors, etc.)
 - Whole Body Counting
- _____ E. If the NRC requests continuous communication on the HPN, establish and maintain communication on the HPN with them and request the RAC:
 - Assign an extra RAC staff member to man the HPN as soon as one is available or,
 - Obtain an additional communicator for the HPN from the ED Assistant.

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RAC/OSC Communicator Checklist

1.0 Perform the following:

NOTE

The following steps should be considered and, if needed, implemented. These steps need not be performed in the sequence listed and may be performed multiple times. The RAC/OSC Communicator should periodically review this checklist to ensure that necessary steps are being performed.

- A. Communicate between RAC and OSC
- B. Communicate with the Remote Assembly Area Personnel
- C. Maintain a Log of activities performed
- D. Provide Event Update to Rad Con Personnel in OSC
- E. Collect information on contaminated/injured personnel
- F. Handle requests for:
 - Activation of on/offsite field teams
 - In-Plant Radiological data, (surveys - dose rates, contamination levels)
 - Medical emergency information
 - Search and Rescue Information
 - Repair Team Information
 - Vehicle/Personnel Contamination Surveys for Site Evacuation.
- G. Interface for obtaining accident samples and sample results:
 - CATPASS: Containment Atmospheric Post Accident Sampling System
 - MAP-5: Particulate and Radioiodine Sample System on effluent pathways
 - RCS PASS: Reactor Coolant System Post Accident Sampling System
 - Radiation Monitoring System (RMS) samples for particulate, radioiodine, noble gas and tritium
 - Other plant samples as required (OTSG, secondary)

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- H. Provide Guidance from RAC on in-plant radiological controls
 - Keep OSC updated on events that may alter radiological conditions in the plant
 - Radiation Controls - e.g., posting of Turbine Building

- I. Obtain data on:
 - Skin contaminations - levels and location of contamination
 - Dose extensions - extension limits, purpose of extensions, personnel receiving extensions
 - Personnel injuries - any radiological concerns

- J. Provide priority from the RAC to the Chemistry Coordinator on accident samples and analysis.

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Field Team Communicator Checklist

1.0 Perform the following:

NOTE

The following steps should be considered and, if needed, implemented. These steps need not be performed in the sequence listed and may be performed multiple times. The Field Team Communicator should periodically review this checklist to ensure that necessary steps are being performed.

- A. Start a log** of information sent and received.
- B. To activate field teams:**
 - Perform radio checks with field team(s).
 - Assign and record field team designations (e.g., Alpha, Bravo, etc.)
 - Obtain and record names and SSNs of all field team members.
 - Obtain and record year-to-date TEDE estimate for all field team members.
- C. Obtain current wind direction and speed** from the RAC or RESE and display it on the EPZ map and the site map.
 - Update the maps with current wind direction and speed every 15 to 20 minutes.
- D. Obtain the projected on-site and off-site doses** from the RAC or RESE.
- E. Determine the locations and desired types of field team surveys, scans and samples** from the RAC.
- F. Provide a briefing for field team members.** Include in the briefing:
 - Plant status
 - Release pathway(s)
 - Projected doses
- G. Direct the teams to locations for surveys, scans and samples.**
 - Provide a definite start point, direction of travel and an end point for scanning (e.g. "scan for plume centerline starting at NNE31, travel toward the Southeast passing through NE31 and continue to ENE31").

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H. Obtain and record field team results.

- Log the results on Exhibit 7.
- Display results on the field team status board.
- Provide results to the RAC for comparison with dose projections.

I. Monitor field team doses (TEDE, CDE and DDE) and respirator usage.

- Keep the RAC informed of field monitoring team doses.
- Advise the RAC to consider the need for additional precautions or team replacement for field monitoring teams whose dose are approaching:
 - 4 REM year-to-date total whole body dose (TEDE) or
 - 25 REM thyroid dose (CDE) during this event.
- If field monitoring team thyroid doses are projected to be 25 REM (CDE) or greater:
 - Advise the RAC to consider obtaining permission to authorize team members to self-administer thyroid blocking agent.

NOTE

Instructions for field monitoring team use of thyroid blocking agent are contained in procedure, EPIP-TMI-.10, Onsite/Offsite Radiological/Environmental Monitoring.

- Advise the RAC to consider the need for field monitoring teams to use respirators.
- If field monitoring teams use respirators, advise them to use extreme caution if they intend to operate their vehicle while wearing a respirator.

J. Transfer responsibility for off-site field team(s) to the EACC when requested by the EAC and approved by the RAC.

K. Monitor and record data obtained by EAC/REMP field teams.

L. Provide communications for the Personnel/Vehicle Monitoring Team(s) if they are using the field monitoring radio system.

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M. Consult with the RAC regarding radiological conditions for personnel at the following locations who are outside of emergency response facilities and may remain on-site:

- North Gate - ext. 8445, 5554, or 8444
- South Gate - ext. 8446
- Processing Center - 8038
- Transportation - ext. 8733 or 8174
- Warehouse 1- ext. 8503
- Medical - ext. 8450, 8189, 8099 or 8103
- Communications - ext. 8197 or 8738

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EXHIBIT 7

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Field Team Designation: _____

Date: _____

Location	Time	Open Window E520 (mR/hr)	Average Closed Window E520 (mR/hr) or Frisker (cpm)		
			Net CPM	Air Sampler	
Time	Sample Type	Run Time		Flow Rate	
		Iodine			
		Particulate			
		Smear			
		Noble Gas			

Field Team Designation: _____

Date: _____

Location	Time	Open Window E520 (mR/hr)	Average Closed Window E520 (mR/hr) or Frisker (cpm)		
			Net CPM	Air Sampler	
Time	Sample Type	Run Time		Flow Rate	
		Iodine			
		Particulate			
		Smear			
		Noble Gas			

FOR INFORMATION ONLY

AmerGen

TMI - Unit 1
Emergency Plan
Implementing Document

Number

EPIP-TMI-.10

Title

Onsite/Offsite Radiological/Environmental Monitoring

Revision No

9

Applicability/Scope

USAGE LEVEL

Effective Date

TMI Division

2

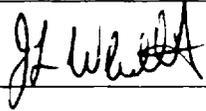
OCT 20 2000

This document is within QA plan scope
Safety Reviews Required

<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No

List of Effective Pages

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19	9						
20	9						

	Signature	Date
Originator	J. L. Whitehead 	10/18/2000
Procedure Owner	/s/ J. L. Whitehead	09/05/00
PRG	/s/ H. K. Olive for J. S. Schork	10/11/00
Approver	/s/ N. Brown	10/11/00

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1.0 **PURPOSE**

The purpose of this procedure is to provide guidance to radiological and environmental monitoring teams for adequate onsite and offsite monitoring of radiation, contamination and airborne radioactivity levels, and environmental sample procurement, following the accidental release of radioactive materials to the environment. The procedure establishes monitoring team actions necessary to obtain data required to make valid radiological assessments.

2.0 **APPLICABILITY/SCOPE**

All TMI Emergency Radiological and Environmental Monitoring Team Personnel.

3.0 **DEFINITIONS**

3.1 **Derived Air Concentration (DAC)** - The airborne concentration of radioactive material that if breathed by a worker for one hour, results in an estimated Internal Whole Body Dose (CEDE) of 2.5 mrem. or in the case of radioiodine, results in an estimated thyroid dose (CDE) of 25 mrem.

3.2 **External Whole Body Dose (DDE)** - The whole body dose from sources external to the body. Typically this is the dose recorded on a whole body TLD. Official term: Deep Dose Equivalent.

3.3 **Internal Whole Body Dose (CEDE)** - The estimated risk-based dose to the whole body resulting from the intake of radioactive material. Official term: Committed Effective Dose Equivalent.

3.4 **Thyroid Dose (CDE(th))** - the dose to the Thyroid resulting from the intake of radioactive material. Official term: Committed Dose Equivalent - thyroid.

3.5 **Total Whole Body Dose (TEDE)** - the sum of the External Whole Body Dose (DDE) and the Internal Whole Body Dose (CEDE).

4.0 **RESPONSIBILITIES**

4.1 The Radiological/Environmental Monitoring Teams are responsible for implementing this procedure.

5.0 **PROCEDURE**

5.1 Implementation Criteria

5.1.1 This procedure is to be initiated upon the direction of the Emergency Director, the Radiological Assessment Coordinator (RAC), the Environmental Assessment Coordinator (EAC), or their designee.

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5.2 Emergency Actions

NOTE

Team members utilize additional radiological precautions when approaching any of the following:

1. 4 REM Year-to-Date Total Whole Body Dose (TEDE).
2. 25 REM Thyroid Dose (CDE) during this event.

Minimize time spent in the plume especially in areas projected (by the RAC/EAC) to have high airborne radioactivity. Utilize protection such as thyroid blocking agent and/or respirators if advised by the RAC.

INITIALS

- _____ 5.2.1 Upon assignment as a monitoring team member, obtain emergency equipment and emergency vehicle.
- 5.2.1.1 Emergency Equipment consists of the following:
- Emergency Equipment/Instrument Kit (suitcase).
 - Air Sampler.
 - Portable Two Way Radio with spare battery.
 - Respirators for Team Members.
- _____ 5.2.2 Record the following information on Exhibit 6: 1) Name, 2) SSN, 3) Date, 4) Current Year-to-date Total Whole Body Dose (TEDE). Item 4 may be obtained from the Rem-on-Line System or may be transmitted via radio while the team is in transit to their first monitoring location.
- _____ 5.2.3 Verify that the seal on the emergency kit was intact.
- 5.2.3.1 If the emergency kit seal was broken, conduct a brief inventory of the major pieces of equipment.

NOTE

There is no need to inventory a kit if its seal was intact.

- _____ 5.2.4 Operationally check all radiation meters and portable air sampler (battery check, air flow check, visual inspection).
- A. Obtain properly calibrated replacements for any meters or samplers found to be unsatisfactory.

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INITIALS

- B. Inform the RAC/EAC of equipment problems and, if needed, request assistance in obtaining replacements.

NOTE

If personnel intend to take air samples in areas inaccessible to vehicles (e.g., Shelley Island), a battery powered air sampler should be obtained for this purpose. A portable generator and an ordinary air sampler can be used if a battery powered air sampler is not available. Check the fuel level in the portable generator and operationally test it by running it momentarily.

- _____ 5.2.5 Fill (or verify filled) the noble gas sampling devices (plastic bottles or marinelli beakers) with water prior to leaving the P.C. or EOF.
- _____ 5.2.6 Issue self reading dosimeters (SRPDs or ESRDs) to team members.
- _____ 5.2.7 Ensure each team member is wearing a TLD.
 - A. Team members responding from on-site should retain their TLD. Team members responding from the EOF should either retain their personal TLD (if available) or be issued a TLD from the supply of emergency TLDs at the EOF.
 - B. Use the individual dose log, Exhibit 6 to track each team member's dose.
 - C. At a minimum, each team member shall enter his/her SRPD/ESRD reading and time when he/she begins monitoring activities and again when he/she returns from the field.
 - D. SRPD/ESRD readings may be entered on the individual exposure log more frequently if a team member so desires (eg., when entering and leaving the plume).

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- E. Keep the RAC/EAC informed of field monitoring team doses.
- Advise the RAC/EAC if any team member's dose approaches:
 - 4 REM year-to-date total whole body dose (TEDE) or
 - 25 REM thyroid dose (CDE) during this event.
 - Recommend that the RAC/EAC consider the need for team relief.

NOTE
Relief should be conducted in a low radiation area.

- Recommend that the RAC/EAC consider authorizing the use of thyroid blocking agent if field monitoring team thyroid doses are projected to be 25 REM (CDE) or greater.
- If the RAC/EAC authorizes the use of thyroid blocking agent, complete a copy of Exhibit 9 for each field team member.
- If the RAC/EAC advises the use of respirators, use extreme caution if operating a vehicle while wearing a respirator.

INITIALS

_____ 5.2.8 Ensure your survey meter is turned on.

NOTE
The survey meter should remain all times during the performance of monitoring team duties.

_____ 5.2.9 Perform radio check with the RAC/EAC (see Exhibit 10 for radio operating guidelines).

NOTE
Radio transmission may affect accuracy of portable instrument response. Information should not be transmitted while taking readings.

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WARNING

Utilize roof top strobe light and vehicle's 4-way flashers whenever you are stopped along the road or travelling significantly slower than the speed limit.

INITIALS

5.2.10 Proceed to the designated monitoring point or other location as directed by the RAC/EAC. (See map in emergency kit for specifically designated monitoring point locations.)

NOTE

The following steps should be implemented as they are needed. These steps need not be performed in the sequence listed and may be performed multiple times. The Field Monitoring Team should periodically review these steps to ensure that necessary actions are being performed.

- A. As time permits, keep a log of your major activities or the Major Activities log, Exhibit 7.
- B. Perform radiological surveys/sampling as directed by the RAC/EAC at designated monitoring locations.
 - Use the appropriate exhibit for the type of survey/sample requested:
 - Exhibit 1 Radiation Surveys (including plume centerline scans).
 - Exhibit 2 Radioiodine and Particulate Air Samples.
 - Exhibit 3 Noble Gas Air Samples.
 - Exhibit 4 Contamination Surveys.
- C. If radio communications are lost, attempt to re-establish radio communications with the RAC/EAC. Move to higher ground if possible.

NOTE

If the portable radio displays "CC SCAN" this indicates that the radio is in a bad location or it is out of range.

- If radio communications cannot be re-established and if you are onsite, drive to the nearest plant page system phone or telephone and contact the RAC.
- If offsite, drive to the nearest telephone and call the RAC or the EAC (as appropriate). A list of important phone numbers is contained in Exhibit 8.
- D. Minimize personnel exposures by moving out of areas of high radiation when counting samples, recording data or awaiting further instructions.
- E. Ensure all team members keep track of their doses in Exhibit 6.

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INITIALS

- _____ F. Maintain all completed exhibits for permanent records.
- _____ G. Return all completed forms to Rad Con Coordinator at the OSC or other location as directed by the RAC/EAC.
- _____ H. Retain all samples for later counting and analysis.

NOTE

Samples may be returned to the Rad Con Lab or designated collection point at a convenient time as directed by the RAC/EAC.

- _____ I. When the Environmental Assessment Command Center (EACC) is activated and takes control of offsite monitoring, begin reporting offsite surveys to the EACC.
- _____ J. Upon relief or upon completion of monitoring duties, team members shall frisk themselves in a low background area and frisk the tires, seats, floor, and foot pedals.
- If any of the above are found to be greater than 100 CPM above background, inform the RAC/EAC and ask for instructions.
 - Recommend to the RAC/EAC that the team be scheduled for a whole body count.
- _____ K. If requested by the RAC/EAC, initiate an RWP to cover the duties performed as a monitoring team at the completion of monitoring team activities (if not already done).

5.3 Additional Actions for Environmental Monitoring Teams

- _____ A. Determine from the EAC the types of samples to be collected. The EAC shall also determine the location and frequency of collection.
- _____ B. Collect and label all samples in accordance with environmental sampling procedures.

NOTE

Plastic disposable gloves shall be worn during the sample collection process.

- _____ C. Return all samples to the EACC (or other location as specified by the EAC) for analysis and retention.

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5.4 Final Conditions

INITIALS

- _____ A. Radiological/Environmental monitoring has been completed and all samples submitted for analysis/retention as directed by the RAC/EAC.
- _____ B. Field monitoring equipment has been returned to the location specified by the RAC/EAC.
- _____ C. If field team members have taken thyroid blocking agent, they should contact company designated medical personnel to determine how long they should continue to take it.

6.0 REFERENCES

- 6.1 6510-PLN-4520.01, Radiological/Environmental Monitoring Program Plan

7.0 EXHIBITS

- 7.1 Exhibit 1, Radiation Surveys
- 7.2 Exhibit 2, Radioiodine and Particulate Air Samples
- 7.3 Exhibit 3, Noble Gas Air Samples
- 7.4 Exhibit 4, Contamination Surveys
- 7.5 Exhibit 5, Radiation/Air/Smear Sample Log
- 7.6 Exhibit 6, Individual Dose Log
- 7.7 Exhibit 7, Major Activities Log
- 7.8 Exhibit 8, Important Telephone Numbers
- 7.9 Exhibit 9, Field Team Thyroid Blocking Agent Administration Form
- 7.10 Exhibit 10, Field Team Radio Operating Guidelines

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EXHIBIT 1

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Radiation Surveys

To perform radiation surveys:

NOTE

Sections A & B below should be implemented as needed based on direction from the RAC/EAC. These sections can be repeated as needed.

A. Plume centerline scans:

1. General Guidance:

- Scanning is most effective when the team slowly travels across the plume at approximately a 90° angle to the wind direction.
 - Scanning should be performed with a frisker or a survey instrument. If a survey instrument is used, the probe window should be open.
 - In inclement weather, the instrument probe should be covered with a surgeon's glove or plastic bag to keep it dry.
2. Ask the RAC/EAC to specify a start and stop point for scanning. If the RAC/EAC provides no direction, consult the map and choose a route which runs as nearly perpendicular as possible to the expected plume direction.
 3. Proceed to the start point with the survey instrument/frisker turned on.
 4. Scan by driving slowly (~ 15 m.p.h.) while holding the instrument probe outside the vehicle.
 5. Locate the point where the instrument reading is highest.
 - 5.1 Scan until the reading rises and then begins to decrease.
 - 5.2 Reverse direction and return to the location where the maximum reading was obtained.
 - 5.3 If the maximum reading persists for a definite distance (i.e., a tenth mile or greater), find the approximate midpoint of that distance.
 6. Report the plume centerline location and maximum reading to the RAC/EAC. When reporting the location, give any landmarks which may help fix your location on a map (e.g., intersections, public buildings, streams, etc.).
 7. Perform a stationary survey as described below unless directed otherwise by the RAC/EAC.

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B. Stationary Surveys:

1. Ensure the probe window is closed and hold the instrument probe at waist level while standing outside the vehicle.
 - In inclement weather, the instrument probe should be covered with a surgeon's glove or plastic bag to keep it dry.
2. Obtain a reading by observing the instrument's needle for several seconds.
 - Mentally average the needle fluctuations to arrive at an average reading.
3. Obtain 3 readings per Step 2 above over a five minute period unless directed otherwise by the RAC/EAC.
4. Record the following in Exhibit 5.
 - 4.1 Record the 3 readings obtained per Step 3. If only 2 reading was taken, record it as "Reading 1".
 - 4.2 If 3 readings were taken, average them and record the average.
 - 4.3 Record the date, time and location of the reading(s).
5. Obtain one reading with the probe window open.
 - 5.1 Record the reading (in mR/hr) in Exhibit 5.
6. Report the location, time, average closed window reading and open window reading to the RAC/EAC.

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EXHIBIT 2

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Radioiodine And Particulate Air Samples

To perform air samples for Iodine and/or Particulate:

NOTE

If possible, load the air sampler with the Silver Zeolite cartridge and particulate filter prior to entering the plume.

1. Unscrew the filter and cartridge holder rings from the air sampler head and install a new Silver Zeolite cartridge and particulate filter.
 - 1.1 Ensure that the arrow on the side of the Silver Zeolite cartridge points toward the air sampler.
 - 1.2 Ensure that the particulate filter is installed such that the side of the filter which has a fibrous appearance is closest to the Silver Zeolite cartridge.
 - 1.3 Reassemble the air sampler head.

NOTE

The sampler flow rate, measure with both a particulate filter and a Silver Zeolite cartridge in place, is written on the air sampler's calibration sticker. The Silver Zeolite cartridge must be in place to ensure obtaining calibrated air flow rate even if an iodine sample has not been requested and the cartridge will not be analyzed in the field.

2. Ensure the following prerequisites and precautions are met:
 - The air sampler shall be placed outside the vehicle or in an open vehicle door or window.
 - Do not place the sampler on the ground or on known contaminated surfaces.
 - Keep the sampler away from vehicle exhaust gases.
 - Protect the sampler from rain and snow.
 - All samples shall be labeled and saved for further analysis.
 - Do not point the air sampler inlet toward any object which may restrict sampler air flow.
 - Do not stand directly in front of the sampler inlet when the sampler is running or allow loose clothing to restrict airflow.

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3. Using the sampler's self timer (or a stopwatch or wristwatch if the sampler is not so equipped) draw a 300 liter (approximately) air sample.
 - 3.1 Use the table below and the sampler's posted flow rate to determine sampler run time. Sampler's with adjustable flow rate should be set to the highest flowrate possible not to exceed 50 lpm (1.8 cfm) and run for approximate time according to the table below.

<u>Posted or Set Flow Rate</u>	<u>Sampler Run Time</u>
≥ 19 < 21	15 minutes
≥ 21 < 25	13 minutes
≥ 25 < 29 lpm	11 minutes
≥ 29 < 32 lpm	10 minutes
≥ 32 < 36 lpm	9 minutes
≥ 36 < 40 lpm	8 minutes
≥ 40 < 46 lpm	7 minutes
≥ 46 < 50 lpm	6 minutes

NOTE

The RAC/EAC or their designee may direct that sampler run time be shortened to reduce time spent in the plume or to reduce the "lead time" in obtaining sample results or lengthened to provide better sensitivity in low concentration areas.

4. Fill out an air sample label with date, time, your name, location, air sampler run time, and air sampler flow rate.
 - 4.1 Also record this data on Exhibit 5.
5. To evaluate the Silver Zeolite cartridge in the field, perform the following steps:
 - 5.1 Obtain a general area background count rate with the E140N/HP260 pancake probe at approximately waist level.
 - 5.1.1 If the background is more than 200 cpm move to a location where background is acceptable (i.e. ≤ 200) and proceed with Step 5.2.
 - 5.1.2 If background is 200 cpm or less, go to Step 5.3.

NOTE

If you cannot find an area where background is ≤ 200 cpm, ask the RAC/EAC for advice.

- 5.2 At the low background area run the air sampler for approximately 3 seconds to flush the cartridge.

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- 5.3 Record the background count rate at the sample counting location on the sample label and on Exhibit 5.
- 5.4 Remove the cartridge from the sampler head and place it in a ziplock bag.

NOTE

Surgeons gloves should be used if the cartridge must be handled and contamination is expected.

- 5.5 Count both sides of the Silver Zeolite cartridge through the ziplock bag.
 - 5.5.1 Record the higher count rate as "gross cpm" on the sample label and on Exhibit 5.
- 5.6 Subtract the background cpm from the gross cpm and record the result as "Net Cpm" on the sample label and on Exhibit 5.
- 5.7 Place the sample label in the ziplock bag and retain the sample for later analysis.

6. To evaluate a particulate filter in the field, perform the following steps:

- 6.1 Obtain a general area background count rate with the E140N/HP-260 pancake probe at approximately waist level.
- 6.2 If the background count rate is more than 200 cpm move to a location where background is acceptable (i.e. ≤ 200 cpm).

NOTE

If you cannot find an area where the background is ≤ 200 cpm, ask the RAC/EAC for advice.

- 6.3 Unscrew the filter holder section of the sampler head from the silver zeolite cartridge holder section such that the particulate filter is held in place in the removed section.
- 6.4 Obtain a gross count rate on the particulate filter by holding the collection side of the filter holder against the HP-260 pancake probe.
- 6.5 Record the count rate as gross CPM on the sample label and on Exhibit 5.
- 6.6 Unscrew the retainer ring from the filter holder and, using tweezers, remove the filter from the holder.
- 6.7 Place the filter in the coin envelope.
- 6.8 Place the coin envelope in a ziplock bag (if an iodine sample was taken, use the same ziplock bag).

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- 6.9 Reinstall the retainer ring onto the filter holder and re-count the filter holder without the particulate filter in place.
- 6.9.1 Enter this count rate as Background CPM on the sample label and on Exhibit 5.
- 6.10 Subtract Background CPM from Gross CPM and record the results as NET CPM on the sample label and on Exhibit 5.
- 6.11 Place the sample label in the ziplock bag and retain the sample for later analysis.
- 6.12 Report the following information from the sample label to the RAC/EAC:
- Location
 - Sample time
 - Net cpm for both silver zeolite cartridge and particulate filter
 - Run time
 - Flow rate

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Noble Gas Air Samples

To obtain noble gas air samples when directed by the RAC/EAC, proceed with Step 1 below:

1. Fill (or obtain a prefilled) clean container (500 ml [0.5 liter] or larger bottle or marinelli beaker) with clean water (i.e., not affected by plant release) (this can be done before going into the field).

NOTE

Field monitoring kit contains water filled plastic bottles for noble gas sampling.

2. When a sample is needed:
 - 2.1 Stand well away from vehicles or other obstructions.
 - 2.2 Pour the water from the container.
 - 2.3 Cap or close the container.
3. Label the sample container with the date/time of collection, and location.
4. Record the same information on Exhibit 5.

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Contamination Surveys

To perform contamination surveys (if directed by the RAC/EAC):

1. Obtain smears and coin envelopes from the emergency kit, label envelope with date, time and location.
2. Wipe the smear over a 100 cm² area (4" x 4" area).
3. Count the background with the E140N w/HP-260 probe (or equiv.).
4. If background is greater than 200 cpm:
 - 4.1 Move to a location where background is ≤ 200 cpm.
 - 4.2 Re-count background and the smear.

NOTE

If you cannot find an area where the background is ≤ 200 cpm. ask the RAC/EAC for advice.

5. Count the smear with the E140N w/HP-260 probe (or equiv.).
6. Enter gross cpm and Bkg. cpm in Exhibit 5.
7. Subtract Bkg. cpm from gross cpm to obtain net cpm.
8. Enter net cpm on Exhibit 5.
9. Report location, time and net cpm for each smear to the RAC/EAC.
10. Save smears in coin envelope for later analysis as directed by the RAC/EAC.

EXHIBIT 5

Radiation/Air/Smear Sample Log

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Date _____

Note: Report only the data in the double outlined boxes to the RAC/EAC

Location	Time	Open Window * E520 (mR/hr)	Closed Window E520 (mR/hr) or Frisker (cpm)				
			Reading 1	Reading 2	Reading 3	Average	
						Air Sampler	
	Time	Sample Type	Gross CPM	Bkg CPM	Net CPM	Run Time	Flow Rate
		Iodine					
		Particulate					
		Smear					
		Noble Gas					

Note: Report only the data in the double outlined boxes to the RAC/EAC

Location	Time	Open Window * E520 (mR/hr)	Closed Window E520 (mR/hr) or Frisker (cpm)				
			Reading 1	Reading 2	Reading 3	Average	
						Air Sampler	
	Time	Sample Type	Gross CPM	Bkg CPM	Net CPM	Run Time	Flow Rate
		Iodine					
		Particulate					
		Smear					
		Noble Gas					

Survey Meter Type _____ Serial No. _____ Cal. Due _____
 Air Sampler Type _____ Serial No. _____ Cal. Due _____
 Counting Inst. Type _____ Serial No. _____ Cal. Due _____
 Technician _____

* Under normal circumstances, open window readings taken with the E-520 are recorded in cpm. however, during emergencies the mR/hr scale shall be used to permit the RAC to more easily compare the relative magnitudes of open window and closed window readings.

EXHIBIT 6
INDIVIDUAL DOSE LOG

Date: _____

NAME (PRINT)	SOC. SEC. #	YTD TOTAL WHOLE BODY DOSE (TEDE) (A)

START TIME	BEGINNING SRPD/ESRD READING (B)	STOP TIME	ENDING SRPD/ESRD READING (C)	EXTERNAL WHOLE BODY DOSE (DDE) (D)	APPROX THYROID DOSE (CDE) (E)*	APPROX INTERNAL WHOLE BODY DOSE (CEDE) FROM IODINE (F)*	APPROX TOTAL WHOLE BODY DOSE (TEDE) (G)	TOTAL THYROID DOSE (CDE) (H)
1				(C1-B1)			(A+D1+F1)	(E1)
2				(C2-B2)			(G1+D2+F2)	(H1+E2)
3				(C3-B3)			(G2+D3+F3)	(H2+E3)
4				(C4-B4)			(G3+D4+F4)	(H3+E4)
5				(C5-B5)			(G4+D5+F5)	(H4+E5)
6				(C6-B6)			(G5+D6+F6)	(H5+E6)

NAME (PRINT)	SOC. SEC. #	YTD TOTAL WHOLE BODY DOSE (TEDE) (A)

START TIME	BEGINNING SRPD/ESRD READING (B)	STOP TIME	ENDING SRPD/ESRD READING (C)	EXTERNAL WHOLE BODY DOSE (DDE) (D)	APPROX THYROID DOSE (CDE) (E)*	APPROX INTERNAL WHOLE BODY DOSE (CEDE) FROM IODINE (F)*	APPROX TOTAL WHOLE BODY DOSE (TEDE) (G)	TOTAL THYROID DOSE (CDE) (H)
1				(C1-B1)			(A+D1+F1)	(E1)
2				(C2-B2)			(G1+D2+F2)	(H1+E2)
3				(C3-B3)			(G2+D3+F3)	(H2+E3)
4				(C4-B4)			(G3+D4+F4)	(H3+E4)
5				(C5-B5)			(G4+D5+F5)	(H4+E5)
6				(C6-B6)			(G5+D6+F6)	(H5+E6)

* See table on next page

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EXHIBIT 6

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NOTE

Notify the RAC/EAC when any team member approaches either of the following:

- 4 REM Year-to-Date Total Whole Body Dose (TEDE).
- 25 REM Thyroid Dose (CDE) during this event.

A rough approximation of the iodine derived air concentration (DAC), thyroid dose (CDE) and internal whole body dose (CEDE) can be obtained using the following relationship:

Every 1000 net cpm on the silver zeolite cartridge equals roughly:

- 20 DAC Iodine,
- 500 mREM/hr Thyroid Dose (CDE) and
- 15 mREM/hr Internal Whole Body Dose (CEDE)

For example: 5000 net cpm on the cartridge would roughly equal: 100 DAC Iodine, 2500 mREM/hr CDE and 75 mRERM/hr CEDE.

NOTE

1. This information is intended for field team use only and not for making dose projections for the public.
2. The relationships shown above are valid only if the sampler run times specified in the sampling instructions are followed.
3. The relationships are based on conservative assumptions (e.g. all iodine is ¹³¹I) and will in most cases overestimate the field team's dose. More refined estimates can be obtained from the RAC or EAC.

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EXHIBIT 8

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Important Telephone Numbers

	<u>Location/Position</u>		<u>Phone Number</u>
Control Room -	RAC		948-8525
	RAC		944-0382
OPS Support Center -	RCC/GRCS	Cellular	948-8248 ext. 5444
			948-8082
Rad Con Lab -			948-8083
Processing Center -	Security		948-8038
Warehouse 1 -	Assembly Area		948-8248 ext. 5500
Warehouse 2 -	Assembly Area		948-8248 ext. 5042
EACC -	EAC		540-4501
EOF -	Group Leader R&EC		657-2097
Simulator (Drills Only) -	RAC		948-2063

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**EXHIBIT 9
Field Team Thyroid Blocking Agent Administration Form**

Page 1 of 2

Instructions:

1. Fill in the information below:

Field Team Member's Name:

Last _____ First _____ Middle Initial _____

Social Security Number: _____ - _____ - _____

Badge Number: _____

Estimated Thyroid Dose (CDE): _____ REM

Name of the RAC/EAC who authorized use of thyroid blocking agent:

Date and time of authorization: _____

2. Read the Thyroid Blocking Agent Precautions (Page 2 of this exhibit).
3. Decide if you should and are willing to take Thyroid Blocking Agent.
4. Record your decision below and sign/date this form.

NOTE

Although 10 CFR 20 allows up to 50 REM per year, EPA and FDA guidance recommend considering the use of thyroid blocking agent (KI) for acute exposures of 25 REM or greater (CDE) to the adult thyroid in order to maintain exposures As Low As Reasonably Achievable (ALARA).

I verify that I have read and understand the information on the Thyroid Blocking Agent Precautions sheet and understand that taking thyroid blocking agent is voluntary.

I also verify that I have no / have a (circle one) known allergy to iodine. If you have a known allergy to iodine you should not take thyroid blocking agent.

I accept / refuse (circle one) thyroid blocking agent.

_____/_____
Signature of Team Member / Date

5. If you have decided to accept thyroid blocking agent:
- Obtain thyroid blocking agent and drinking water from the field monitoring kit.
 - Take the initial dose of one (1) tablet.
 - Notify the RAC/EAC of this action.

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EXHIBIT 9

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HOW POTASSIUM IODIDE WORKS

Certain forms of iodine help your thyroid gland work right. Most people get the iodine they need from foods, like iodized salt or fish. The thyroid can "store" or hold only a certain amount of iodine.

In a radiation emergency, radioactive iodine may be released in the air. This material may be breathed or swallowed. It may enter the thyroid gland and damage it. The damage would probably not show itself for years. Children are most likely to have thyroid damage.

If you take potassium iodide, it will fill-up your thyroid gland with non-radioactive iodine. This reduces the chance that radioactive iodine will enter the thyroid gland.

WHO SHOULD NOT TAKE POTASSIUM IODIDE

The only people who should not take potassium iodide are people who know they are allergic to iodide. You may take potassium iodide even if you are taking medicines for a thyroid problem (for example, a thyroid hormone or anti-thyroid drug). Pregnant and nursing women and babies and children may also take this drug.

HOW AND WHEN TO TAKE POTASSIUM IODIDE

Potassium iodide should be taken as soon as possible after proper authorization is received. You should take one dose every 24 hours. More will not help you because the thyroid can "hold" only limited amounts of iodine. Larger doses will increase the risk of side effects. You will probably be told not to take the drug for more than 10 days. Contact company medical personnel to determine how long you should take potassium iodide.

SIDE EFFECTS

Usually, side effects of potassium iodide happen when people take higher doses for a long time. You should be careful not to take more than the recommended dose or take it for longer than you are told. Side effects are unlikely because of the low drug dose and the short time you will be taking the drug.

Possible side effects include skin rashes, swelling of the salivary glands, and "iodism" (metallic taste, burning mouth and throat, sore teeth and gums, symptoms of a head cold, and sometimes stomach upset and diarrhea).

A few people could have an allergic reaction with more serious symptoms. These could be fever and joint pains, or swelling of parts of the face and body at times severe shortness of breath requiring immediate medical attention

Taking iodide may rarely cause overactivity of the thyroid gland, underactivity of the thyroid gland, or enlargement of the thyroid gland (goiter).

WHAT TO DO IF SIDE EFFECTS OCCUR

If the side effects are severe or if you have an allergic reaction, stop taking potassium iodide and contact the medical department.

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EXHIBIT 10

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Field Team Radio Operating Guidelines

NOTE

The following sections provide guidance for operation of the field team portable radios. Individual sections can be implemented as needed.

To operate the portable radio:

- A. Turn on the portable radio by rotating the "power on-off/volume" knob clockwise. The radio will perform a "power up self test" and then display:
 - Its unit number (e.g., "TMI P 1" is portable radio #1) and
 - Either "EARS" or "CC SCAN" depending on whether the radio is receiving the system Control Channel signal (i.e., if "CC SCAN" appears, the radio is out of range or in a bad location).

- B. To transmit:
 - Make sure that "EARS" is displayed on the front of the radio and then press the Push-To-Talk (PTT) button (elongated button on the left side of the radio).
 - When the short medium pitch beep is heard, begin speaking.
 - If a high pitch beep is heard when the PTT is pressed, the system is temporarily busy. Don't release the PTT button - continue pressing it and wait for the short medium pitch peep before starting to speak. The delay should typically be not more than a few seconds.
 - When speaking, hold the radio approximately 3 inches from the mouth and speak in a normal voice.

- C. Receiving:
 - When a call is being received the calling station's identity is displayed in the upper line of the radio's display.

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EXHIBIT 10

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D. System status beeps:

- The radio will indicate system status by emitting any of several beeps:
 - A short medium pitch beep indicates that the radio has begun to transmit and the user may begin speaking.
 - A high pitch beep indicates that all system channels are busy and the radio is waiting for the next available channel. The user should continue pressing the PTT button until a short medium pitch beep is heard and then begin speaking.
 - If five short high pitch beeps are heard while transmitting, this indicates that the radio is approaching its 60 second transmission length limit. Unless the radio is un-keyed before the long low pitch beep is heard, the radio will stop transmitting and information will be missed. Long transmissions should be broken into several shorter transmissions to avoid this.
 - A low pitch beep simultaneous with the appearance of a battery icon in the lower right corner of the display indicates that the battery voltage is low and the battery should be changed.

E. To replace the battery pack:

- Turn the radio off.
- Depress the recessed button beside the belt clip on the rear of the radio and slide the battery toward the bottom of the radio.
- Lift the battery up and away from the radio.
- To install a fresh battery pack: Align the tabs on the battery with the slots on the radio and slide the battery pack toward the top of the radio until it clicks.

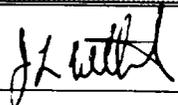
F. The channel selector knob and the buttons on the front panel of the radio serve no function and should not be manipulated.

FOR INFORMATION ONLY

AmerGen	TMI Emergency Plan Implementing Procedure	Number EPIP-TMI-16
Title Contaminated Injuries		Revision No. 7
Applicability/Scope TMI Division	USAGE LEVEL 1	Effective Date OCT 20 2000
This document is within QA plan scope	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Safety Reviews Required	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

List of Effective Pages

<u>Page</u>	<u>Revision</u>	<u>Page</u>	<u>Revision</u>	<u>Page</u>	<u>Revision</u>	<u>Page</u>	<u>Revision</u>
1	7						
2	7						
3	7						
4	7						
5	7						
6	7						
7	7						
8	7						
9	7						
10	7						
11	7						
12	7						
13	7						
14	7						
15	7						
16	7						

	Signature	Date
Originator	J. L. Whitehead 	10/10/2000
Procedure Owner	/s/ J. L. Whitehead	09/05/00
PRG	/s/ E. R. Frederick for J. S. Schork	10/03/00
Approver	/s/ N. D. Brown	10/03/00

	TMI Emergency Plan Implementing Procedure	Number EPIP-TMI-16
Title Contaminated Injuries	Revision No. 7	

1.0 PURPOSE

- 1.1 To define the conditions where personnel who become ill or injured and contaminated or potentially contaminated with radioactive material in excess of guidelines will be removed from site to Hershey Medical Center (HMC), Hershey, PA. and/or to the Harrisburg Hospital, Harrisburg, PA.
- 1.2 To further define the steps involved in notifying HMC or Harrisburg Hospital to allow time for preparation of the Radiation Emergency Area (REA) to receive the injured personnel.
- 1.3 To provide for several levels of treatment based on the severity of the injury(s) and the degree of contamination involved.

NOTE

All personnel having injuries or illness in a radiologically contaminated area or involving radioactive material shall be considered potentially contaminated until proven otherwise.

2.0 APPLICABILITY/SCOPE

All TMI Personnel

3.0 DEFINITIONS

None

4.0 RESPONSIBILITIES

- 4.1 The Shift Manager is responsible for the implementation of this procedure and specifically for completion of Exhibit 1.
- 4.2 The Group Radiological Controls Supervisor (GRCS) has responsibility for ensuring that the steps in Exhibit 2 are performed.
- 4.3 The Radiological Controls Technician assigned to accompany the patient to the hospital is responsible to ensure that the steps in Exhibit 3 are performed.

5.0 PROCEDURE

- _____ 5.1 Upon receiving notification of an injured or ill person, the Shift Manager shall notify:
 - ◆ The site Medical Response Team (see Exhibit 7 for instructions for paging the Medical Response Team),
 - ◆ The TMI Medical Department (phone 8327) (daytime, weekdays only),
 - ◆ Group Rad Controls Supervisor (GRCS) (phone 8083 or 5444)
- _____ 5.2 The Shift Manager shall determine from Rad Controls if the person is contaminated or potentially contaminated.

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- _____ 5.3 If the injured or ill person is either contaminated or potentially contaminated and must be transported to an off-site medical facility prior to decontamination:
- ◆ The Shift Manager shall ensure that the steps in Exhibit 1 are performed.
 - ◆ The GRCS shall ensure that the steps in Exhibit 2 are performed.
 - ◆ The Radiological Controls Technician assigned to accompany him/her shall ensure that the steps in Exhibit 3 are performed.

- _____ 5.4 Final Conditions
- A. The person(s) has been entered into the bioassay program for whole body counting per Reference 6.2 (6610-ADM-4025.01, Bioassay Procedure).
 - B. The patient has been transported to the hospital and has been admitted or released, and all radioactive waste/used protective clothing has been removed to TMI.
 - C. The Radiological Controls Technician(s) who accompanied the patient to the hospital has coordinated the Radiation Safety actions at the emergency room. The Hospital Health Physicist (if available) has relieved the Radiological Controls Technician(s).
 - D. The Radiation Emergency Area and ambulance(s) used for transportation of the patient(s) have been surveyed and cleared or decontaminated and cleared by the TMI Radiological Controls Technician(s).

6.0 **REFERENCES**

- 6.1 EPIP-TMI-19, Emergency Dosimetry/Security Badge Issuance
- 6.2 6610-ADM-4025.01, Bioassay Procedure
- 6.3 6610-ADM-4241.05, Dosimetry Investigative Report
- 6.4 6610-ADM-4330.02, Personnel Contamination Monitoring and Decontamination
- 6.5 AP 1044, Event Review and Reporting Requirements

7.0 **EXHIBITS**

- 7.1 Exhibit 1, Shift Manager Checklist for Contaminated Injuries
- 7.2 Exhibit 2, GRCS Checklist for Contaminated Injured Persons
- 7.3 Exhibit 3, Radiological Controls Technician Checklist for Contaminated Injured Persons
- 7.4 Exhibit 4, Messages to Dauphin County and the Hospital
- 7.5 Exhibit 5, Hershey Medical Center Emergency Dept. Floor Plan

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- 7.6 Exhibit 6, Harrisburg Hospital Emergency Dept. Floor Plan
- 7.7 Exhibit 7, Instructions for Paging the Medical Response Team

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EXHIBIT 1

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Shift Manager Checklist for Contaminated Injuries

NOTE

The following steps may be performed concurrently. Conditional steps (i.e., steps containing an "if" statement) should be marked "N/A" and skipped if the condition is not met.

Check

- ___ A. The Shift Manager should consult with Radiological Controls to determine if radiological conditions warrant a specific route for access to the patient and for patient transfer.
 - ◆ If so, provide this information to Medical Response Team.
- ___ B. Obtain Medical Response Team's assessment of the medical needs of the patient.
- ___ C. Obtain Radiological Controls assessment of the radiological condition of the patient.
- ___ D. If off-site medical assistance is required:
 - ◆ The Shift Manager (or his designee) shall fill out Message #1 from Exhibit 4 and use it to notify Dauphin Co. Emergency Operations Center (EOC).
 - ◆ Call Security Central Alarm Station at Extension 8039, 8040 to inform them of off-site medical assistance arrival so that they can direct off-site medical personnel to the patient.
 - ◆ The Shift Manager shall initiate the requirements of Reference 6.1 (EPIP-TMI-.19, "Emergency Dosimetry/Security Badge Issuance") if emergency medical personnel are responding from off-site.
- ___ E. If the site ambulance is to be used for patient transport, call the Security Central Alarm Station at Extension 8039, 8040 and request that Security expedite site ambulance access to the Protected Area or injury scene, as appropriate.
- ___ F. With concurrence of the Medical Response Team and Radiological Controls personnel, have the patient transported outside of the radiologically controlled area for further treatment and surveys if the injury/illness and contamination levels will allow movement.
- ___ G. To prevent the possible spread of contamination, the Shift Manager should consider having the contaminated person's evacuation route announced on the page system, as appropriate.

NOTE

By agreements with the Hershey Medical Center (HMC) Hershey, PA and Harrisburg Hospital, Harrisburg, PA., all contaminated persons with injuries too severe to be treated on-site shall be sent to HMC and/or Harrisburg Hospital for decontamination and treatment.

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EXHIBIT 1

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- _____ H. If the decision is made to transport the patient to an offsite medical facility, the Shift Manager or his designee shall call the appropriate hospital (determine hospital from the Medical Response Team or Ambulance Crew), and using Message #2 on Exhibit 4, alert the hospital of the arrival of the injured patient.
- _____ I. If contact with HMC or Harrisburg Hospital cannot be made by telephone, relay the message through the Dauphin County EOC by dialing 9-911 or by using the Notification Line in the Control Room.
- _____ J. Report this event to the NRC via the ENS in accordance with 10 CFR 50.72(b)(2)(v). Notification shall be made as soon as practical and, in all cases, within four (4) hours.
- _____ K. Declare an Event of Potential Public Interest in accordance with Reference 6.5, (AP 1044, Event Review and Reporting Requirements).

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EXHIBIT 2

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GRCS Checklist for Contaminated Injured Persons

NOTE

The following actions should be performed or considered while handling a contaminated injured person. These actions must not interfere with proper medical treatment of the person.

NOTE

The steps in this exhibit may be performed concurrently. Conditional steps (i.e., steps containing an "if" statement) should be marked "N/A" and skipped if the condition is not met.

Check

- _____ A. If the injury/illness allows, direct Radiological Controls personnel to assess the degree of radiation exposure and/or radioactive contamination prior to removal of the individual from site.
- _____ B. If the patient is contaminated, or potentially contaminated, assign a Radiological Controls Technician to accompany the patient to the hospital to provide Radiological Controls support.
 - _____ ♦ If transport is provided by helicopter (i.e., Life Lion) Radiological Controls Technician should travel by vehicle to the hospital.

NOTE

By agreements with the Hershey Medical Center (HMC) Hershey, PA and Harrisburg Hospital, all contaminated persons with injuries too severe to be treated on-site shall be sent to HMC and/or Harrisburg Hospital for decontamination and treatment.

- _____ C. Ensure that the technician who accompanies the patient to the hospital has a radiation survey meter, a frisker and the ambulance kit (located in 305' Control Tower Stairwell).
- _____ D. All ambulance personnel should retain their dosimetry until retrieved at the hospital by the Rad Con Tech.
- _____ E. If available, a second Rad Con Tech should be sent to follow the ambulance to the hospital to assist with monitoring and decontamination.
 - _____ ♦ Send appropriate additional survey/frisking equipment and supplies with the second Rad Con Tech.
- _____ F. Ensure that the Control Room is informed of any status updates provided to you by the Rad Con Tech.

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EXHIBIT 3

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**Radiological Controls Technician Checklist for
Contaminated Injured Persons**

NOTE

The following actions should be performed or considered while handling a contaminated injured person. These actions must not interfere with proper medical treatment of the person.

NOTE

The steps in this exhibit may be performed concurrently. Conditional steps (i.e., steps containing an "if" statement) should be marked "N/A" and skipped if the condition is not met.

Check

- A. If the patient's condition permits, assess radiation exposure/contamination levels prior to removal of the patient from TMI.
- B. If the patient is contaminated or potentially contaminated, accompany the patient to the hospital to provide radiological controls support.
 - ♦ If the patient is transported by helicopter (i.e., Life Lion), travel by vehicle to the hospital.

NOTE

By agreements with the Hershey Medical Center (HMC) Hershey, PA and Harrisburg Hospital, all contaminated persons with injuries too severe to be treated on-site shall be sent to HMC and/or Harrisburg Hospital for decontamination and treatment.

- C. Prevent the spread of contamination from the patient to other persons/areas by:
 - ♦ Covering the stretcher with plastic
 - ♦ Wrapping the patient in a blanket
 - ♦ Providing P.C.'s to stretcher bearers
 - ♦ keeping unnecessary personnel out of the transfer path, etc.

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EXHIBIT 3

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- ___ D. If the ambulance crew has not been issued TLDs, notify the GRCS and request TLDs for them.
 - ___ ◆ Allow the ambulance crew immediate access to the patient.
 - ___ ◆ Issue TLDs if/when conditions permit.
 - ___ ◆ If TLDs were not issued, document this fact.
- ___ E. Limit contamination of the ambulance and crew by appropriate measures such as:
 - ___ ◆ Providing P.C.'s to the crew and/or
 - ___ ◆ Laying plastic on the floor of the ambulance.
- ___ F. Take a radiation survey meter, a frisker and the ambulance kit (located in the 305' Control Tower Stairwell) with you to the hospital.
- ___ G. Ensure that ambulance personnel do not turn in their dosimetry as they leave the site. They should retain it until they turn the patient over to hospital personnel.
- ___ H. If possible, verify contamination and radiation levels on the patient enroute to the hospital.
- ___ I. Upon arrival at the hospital and subsequently, provide periodic updates to the Control Room.
- ___ J. Provide radiological controls support to the Emergency Department staff in the following areas:
 - ___ ◆ Contamination Control
 - ___ ◆ Exposure Control
 - ___ ◆ Patient Decontamination
 - ___ ◆ Access Control
 - ___ ◆ Personnel Monitoring
 - ___ ◆ Dosimetry
- ___ K. Survey the path from the ambulance to the treatment room. Refer to Exhibits 5 or 6 for the appropriate hospital floor plan.
- ___ L. Request that the ambulance and crew are not released until:
 - ___ ◆ The ambulance and crew have been verified to be free of contamination and
 - ___ ◆ TLD's (if issued) have been collected.

NOTE

With permission from the Shift Manager, the ambulance and crew can return to TMI for survey and decontamination as needed.

- ___ M. Obtain necessary information as appropriate for any Dosimetry Investigative Reports per Reference 6.3 (6610-ADM-4241.05, Dosimetry Investigative Report).

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EXHIBIT 3

N. Remain at the hospital until:

- _____ ♦ Rad Con responsibilities are turned over to hospital health physics (HMC only) or
- _____ ♦ Patient and hospital emergency room area are decontaminated or
- _____ ♦ Patient is released or
- _____ ♦ You are properly relieved by another technician.

NOTE

Harrisburg Hospital does not have a health physicist; TMI Rad Controls personnel must continue to provide radiological controls assistance, as needed.

_____ O. Before leaving the hospital:

- _____ ♦ Ensure all contaminated trash and used P.C.'s are collected and
- _____ ♦ A thorough survey of the hospital emergency room and adjacent areas, as applicable, has been completed and documented.

_____ P. Any material that is above release limits should be securely sealed in plastic, marked "Radioactive", and returned to the site.

- _____ ♦ Prior to transporting material marked "Radioactive", consult with a representative of the TMI Waste Disposal Group, if possible.

_____ Q. Ensure the Control Room is informed of the status.

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EXHIBIT 4

Messages to Dauphin County and the Hospital

Message #1

To: Dauphin County Emergency Operations Center
Dial 9-911

"This is _____ at TMI Nuclear Station. We request EMS be
Name/Title

dispatched to Three Mile Island. We have (potentially) contaminated personnel with the following injuries/illness:

(Brief description of injuries/illness): _____

Please advise us whether this individual should go to Hershey Medical Center or to Harrisburg Hospital."

Message #2

To: (For Hershey Medical Center) Charge Nurse, Emergency Room, Dial 9-531-8333
(For Harrisburg Hospital) Senior Attending Physician on Duty, Dial 9-782-3131

"This is _____ at TMI Nuclear Station.
Name/Title

TMI is transferring a (potentially) contaminated patient with injuries to Hershey Medical Center/Harrisburg Hospital

(circle one). The Radiation Emergency Area should be prepared to receive the patient."

(Cont'd next page)

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EXHIBIT 4

Please take down the following information:

Patient's Name(s): _____

Nature of injury/illness(s): _____

Contamination Levels (if known): _____

Estimated Time of Arrival: _____

Method of Transport: _____

Additional Misc. Info. _____

This section for Hershey Medical Center ONLY

Please provide me with the following information either now or when you call back to verify this message:

Will HMC Health Physics Personnel be available in the Emergency Room?
 Yes/No (inform TMI Rad Con of Response)

(Cont'd next page)

EXHIBIT 5

Hershey Med Center Emergency Dept. Floor Plan

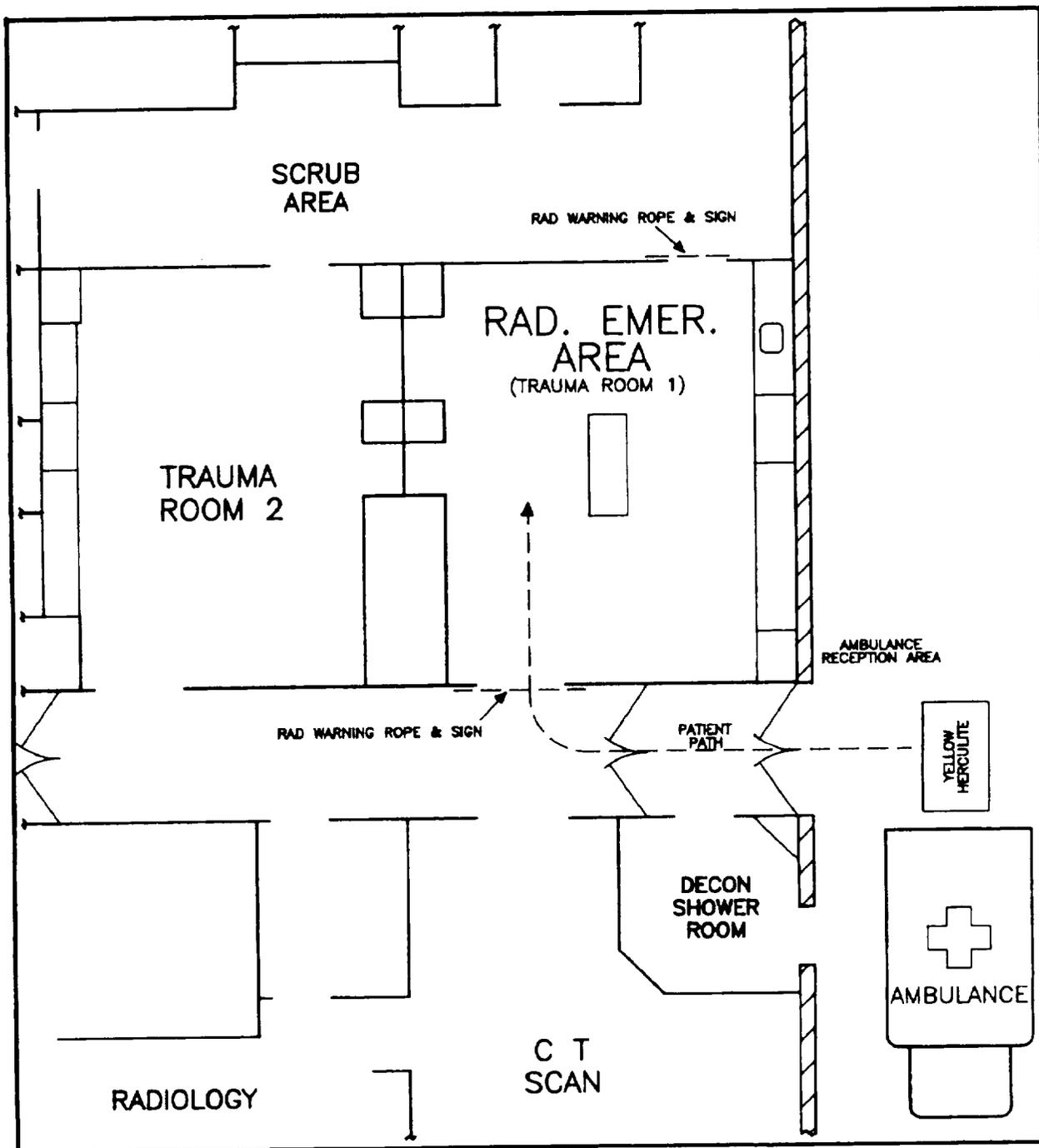
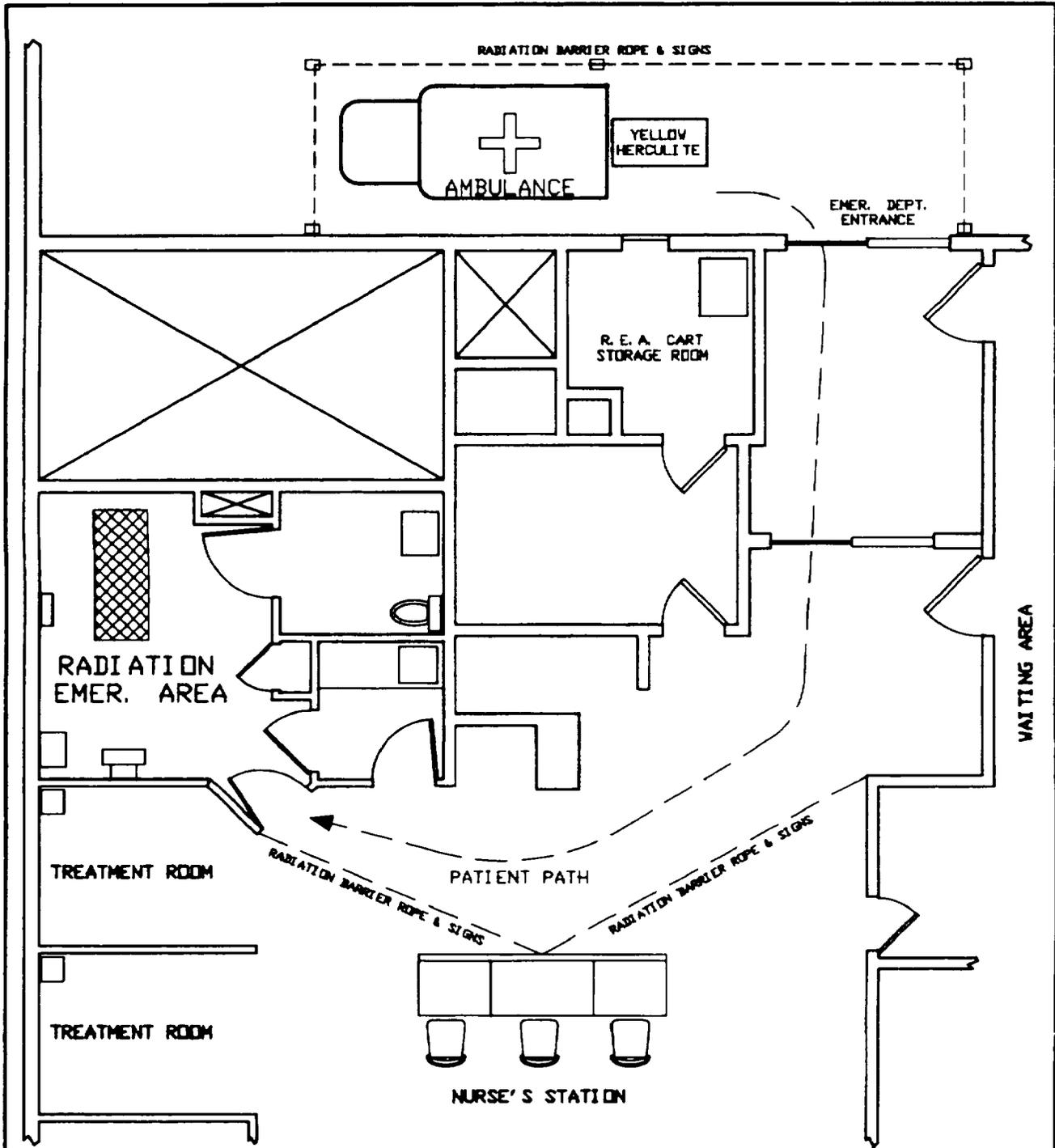


EXHIBIT 6

Harrisburg Hospital Emergency Dept. Floor Plan



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Contaminated Injuries	Revision No. 7	

EXHIBIT 7

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Instructions for Paging the Medical Response Team

1. Dial the Medical Response Team group pager number: 9-237-1060.
2. When prompted for the password, dial 3680.
3. Dial "911*" plus the location code from the table below. (For drills, dial "912*" plus the location code.)

Patient Location	Location Code
U-1 Service Building	1
U-1 Turbine Building	2
U-1 Aux. Building	3
U-1 Control Building	4
OSF	5
NOB	6
Warehouse 1	7
Screen House	8
SOB	9
Unit 2 (all areas)	10
Training Center/Simulator Building	11
OESB	12
TEST	13
OOB	14
North Gate	15

FOR INFORMATION ONLY

AmerGen

TMI Emergency Plan
Implementing Document

Number

EPIP-TMI-.19

Title

Emergency Dosimetry/Security Badge Issuance

Revision No

10

Applicability/Scope

USAGE LEVEL

Effective Date

TMI Division

2

OCT 20 2000

This document is within QA plan scope

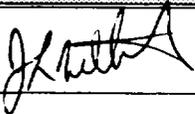
Yes No

Safety Reviews Required

Yes No

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7	10						

	Signature	Date
Originator	J. L. Whitehead 	10/10/2000
Procedure Owner	/s/ J. L. Whitehead	09/05/00
PRG	/s/ E. R. Frederick for J. S. Schork	10/03/00
Approver	/s/ N. D. Brown	10/03/00

	TMI Emergency Plan Implementing Document	Number EPIP-TMI-.19
Title	Revision No. 10	
Emergency Dosimetry/Security Badge Issuance		

1.0 **PURPOSE**

To establish the method of issuance of Thermoluminescent Dosimeters (TLD) and Escort Required Security Badges (ER Badges) to emergency personnel requiring access to TMI.

2.0 **APPLICABILITY/SCOPE**

All TMI personnel

3.0 **DEFINITIONS**

None

4.0 **RESPONSIBILITIES**

4.1 For Fire/Ambulance/Police emergencies, the Site Protection Shift Supervisor/Senior Site Protection Officer (SPSS/SSPO) shall be responsible for implementing the actions outlined in Section 5.2.1.

4.2 For all other emergencies, the Group Leader, Admin Support/Group Leader R&EC will be responsible for implementing the actions outlined in Section 5.2.2.

5.0 **PROCEDURE**

5.1 Implementation Criteria

5.1.1 Upon requesting response by Fire/Ambulance/Police to TMI, or

5.1.2 Upon requesting additional support personnel or upon arrival of NRC personnel during a declared emergency requiring processing via the Emergency Operations Facility (EOF), 2574 Interstate Dr., Commerce Park, Harrisburg, PA, or

5.1.3 As directed by the Shift Manager/Emergency Director.

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5.2 Emergency Actions

NOTE

Implement the appropriate section(s) (A and/or B) based upon the type of personnel responding to TMI.

Conditional steps (i.e., steps containing an "if" statement) should be considered "N/A" and skipped if the condition is not met.

A. Fire/Ambulance/Police access to TMI

1. After notification by the Shift Manager/Emergency Director, or his designee, that Fire/Ambulance/Police have been dispatched to the site, the SPSS/SSPO shall:
 - ◆ If an SPO is available, dispatch an SPO to the appropriate gate (i.e., North or South gate) to ensure immediate access and to escort the response personnel to the appropriate on-site location.
 - ◆ If an SPO is not available, request the Shift Manger/Emergency Director dispatch any available on-site employees to perform Step a above.
2. TLD's and ER Badges should be issued to all emergency crews responding onto TMI. Issuance should occur at the Unit 1 Processing Center or other appropriate on-site location. Protected Area ingress portals. Issuance shall be as follows:

NOTE

For Security Events - after the Security Command Center is established Badges and TLD's will be issued, as needed, from the Command Center. Exhibits 1 and 2 will be filled out at time of issuance if time permits.

- ◆ Open emergency TLD box and remove the necessary number of ER badges and TLD's.

NOTE

TLD's and ER Badges are stored at the Processing Center.

CAUTION

Do not issue the Control/Background TLD's.

- ◆ If emergency crew must enter through an alternate location, an SPO shall meet the emergency crew at that location to issue ER badges and TLD's.

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- ◆ Request the following information from the Fire/Ambulance/Police personnel:
 - Number of personnel onboard
 - Are all personnel members of the responding organization (non-members must remain off-site)
 - Anyone under 18 years of age onboard (must remain off-site)
 - ◆ State the following to the responding personnel - "If anyone onboard is pregnant or believes they may be pregnant - we advise that they remain off-site."
 - ◆ Issue badges and TLD's to emergency crew members as they pass through the issue point.
3. If additional TLD's are needed, contact the RAC at 8525 (2063 for drills) or Rad Controls at 8083.
4. Upon completion of the emergency (including patient transport for ambulance personnel), retrieve the ER badges and TLD's from the emergency crew.
- ◆ If no patient transport is involved, retrieve the ER badges and TLD's from the emergency crew at the entry point.
 - ◆ If patient transport is involved, the ambulance crew should take the patient to the hospital first and then return to the site to turn in their TLDs and badges.
 - ◆ Obtain all necessary information from the crew members by filling out Exhibit 1 and having the emergency personnel fill out a copy of Exhibit 2. Exhibits are stored with the badges and TLD's.
 - ◆ Notify Dosimetry personnel at extension 8473/8474 or the Group Radiological Controls Supervisor at extension 5444/8083 for TLD processing.

NOTE

The TMI Rad Con Technician at the hospital can retrieve ER badges, TLD's and information from ambulance crews.

- B. For emergency personnel not requiring immediate entry to TMI, i.e.: Support personnel from other sites and agencies (e. g., NRC) processing into TMI from the EOF.
- ◆ Activate the badging issuance function at the EOF.
 - ◆ Issue emergency security badges.

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- ◆ Activate the dosimetry issuance function at the EOF.
- ◆ Issue emergency dosimetry in accordance with Reference 6.2.

5.3 Final Conditions

- A. Fire/Ambulance/Police personnel (as appropriate to the situation) have entered TMI, performed the required emergency actions and exited site, leaving ER badges and TLD's with SPO at entry point or R.C. Tech at hospital as appropriate.
- B. Support personnel from other sites and agencies (if needed to support emergency response) are properly processed into TMI via the EOF.

6.0 **REFERENCES**

- 6.1 1092, TMI Emergency Plan
- 6.2 6610-ADM-4241.01, Dosimetry Issue and Data Handling

7.0 **EXHIBITS**

- Exhibit 1 - Emergency TLD/ER Security Badge Issuance Form
- Exhibit 2 - Emergency Response Information Form

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EXHIBIT 2

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EMERGENCY RESPONSE INFORMATION FORM

Today's Date: _____ Social Security Number _____

Full Name: _____ Sex: M F
Last
First
M.I.

Birth Date _____ U.S. Citizen: Y N

Site Code: TMI Company Code: H43

Purpose of Visit to TMI: Emergency / Drill / Other
circle one

Birth City: _____ Birth State: _____

Birth County/Country: _____

Current Home Address: _____

Home Street: _____

Home City: _____ Home State: _____ Zip: _____

Home Phone: _____

Work Phone: _____

Name of Fire Dept. or Emergency Organization:

Have you received any radiation exposure at your job within the last 12 months?

Yes No (Circle one)

If yes, where? _____

Security Initials _____

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Emergency Operations Facility

15

Applicability/Scope

USAGE LEVEL

Effective Date

TMI Division

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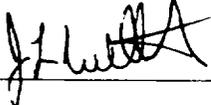
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This document is within QA plan scope
Safety Reviews Required

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20	15	40	15	60	15	80	15

	Signature	Date
Originator	J. L. Whitehead 	10/18/2000
Procedure Owner	/s/ J. L. Whitehead for N. Brown	09/11/00
PRG	/s/ H. K. Olive for J. S. Schork	09/11/00
Approver	/s/ N. Brown for J. Grisewood	10/04/00

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1.0 **PURPOSE**

Provide guidelines for activation and operation of the Emergency Operations Facility (EOF).

2.0 **APPLICABILITY/SCOPE**

This procedure shall apply to all TMI personnel assigned to the EOF during a Site Area Emergency. General Emergency or when EOF activation is required by the Emergency Director.

3.0 **DEFINITIONS**

None

4.0 **RESPONSIBILITIES**

- a. Emergency Support Director - Exhibit 1, 2, 3, 4, 5, 8 and 14
- b. EOF Communications Coordinator - Exhibit 23 and 24
- c. Technical Support Representative - Exhibit 15 and 15A
- d. Group Leader R & EC - Exhibit 17
- e. Group Leader Adm. Support - Exhibit 6, 7, 7A, 20, 21 and 22
- f. Public Information Rep. - Exhibit 12, 13 and 14
- g. Environmental Assessment Coord. - Exhibit 18
 - Met/Dose Coordinator - Exhibit 18A and 18B
- h. Emergency Support Director Asst. - Exhibit 10
- i. Emergency Preparedness Rep. - Exhibit 9 and 9A

5.0 **PROCEDURE**

- a. Personnel shall perform actions as specified in the appropriate exhibits as applicable for the level and severity of the emergency.
- b. Personnel shall respond to specific requests from the Emergency Response Organization management (e.g., ESD, Group Leaders, Coordinators)

6.0 **REFERENCES**

- a. TMI Emergency Plan (AP 1092)
- b. TMI Emergency Plan Implementing Documents

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7.0 **EXHIBITS**

- 7.1 Exhibit 1, Emergency Support Director Checklist
- 7.2 Exhibit 2, Emergency Report Form – TMI
- 7.3 Exhibit 3, EAL descriptions for the Emergency Report Form
- 7.4 Exhibit 4, Emergency Director/Emergency Support Director Turnover Checklist
- 7.5 Exhibit 5, Emergency Support Director Emergency Briefing Sheet
- 7.6 Exhibit 6, EOF Access Control
- 7.7 Exhibit 7, TMI Access Authorization Checklist
 - 7.7.1 Exhibit 7A, TMI Access Authorization
- 7.8 Exhibit 8, PAR Logic Diagram
- 7.9 Exhibit 9, Emergency Preparedness Representative Checklist
 - 7.9.1 Exhibit 9A, Fitness For Duty instructions
- 7.10 Exhibit 10, Emergency Support Director Assistant Checklist
- 7.11 Exhibit 11, ESD Logkeeper Checklist
- 7.12 Exhibit 12, Public Information Representative - EOF Checklist
- 7.13 Exhibit 13, Press Release Guidance
- 7.14 Exhibit 14, Site Access For Media
- 7.15 Exhibit 15, Tech Support Representative Checklist
 - 7.15.1 Exhibit 15A, Plant Process Computer Access Instructions
- 7.16 Exhibit 16, TMI / NRC Emergency Response Interface Criteria
- 7.17 Exhibit 17, Group Leader Radiological & Environmental Controls Checklist
- 7.18 Exhibit 18, Environmental Assessment Coordinator Checklist
 - 7.18.1 Exhibit 18A, Met/Dose Coordinator Checklist
 - 7.18.2 Exhibit 18B, Field Team Data Collection
- 7.19 Exhibit 19, RAC Line Communicator Checklist
- 7.20 Exhibit 20, Group Leader Admin Support Checklist

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- 7.21 Exhibit 21, Emergency Shift Schedule (Watch Bill)
- 7.22 Exhibit 22, EOF Setup for Monitoring and Decontamination
- 7.23 Exhibit 23, EOF Communications Coordinator Checklist
- 7.24 Exhibit 24, Offsite Notifications Checklist

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ESD Checklist

I. EOF ACTIVATION

NOTE

The ESD Assistant MAY assist in the completion of this checklist and Exhibit 4.

NOTE

The following steps are presented in the sequence that is most likely to result in efficient activation of the EOF. Steps may be performed out of sequence as the situation requires. Steps that are not applicable for the present situation may be skipped but should be reconsidered as the situation changes.

Initial

1.0 Activate the EOF

NOTE

The facility is considered activated when all portions of Step 1 are completed.

- a. Obtain a turnover from the Emergency Director (ED)
 - Use the Emergency Director's Line, or alternate means
 - Complete Exhibit 4 to document the turnover.
- _____ b. Use the EOF intercom to brief personnel on plant conditions using Exhibit 5.
 - Include NRC and State representative(s), if available.
 - Include State Representative(s), if available.
- _____ c. Verify from the EP Rep. that the EOF response positions have been manned within one hour of notification.
- d. After the above steps have been completed, assume ESD responsibilities by performing the following:
 - Inform the Emergency Director (ED) that you have assumed the position of ESD and will take over responsibility for the following:
 - a. Approving and directing information releases to the media.

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- b. Approving and, if possible, personally conveying appropriate Protective Action Recommendations to the Senior Official in the State EOC (Emergency Operations Center).
- c. Brief the NRC Site Team Leader and serve as the official point of contact for TMI for receiving NRC directives. This includes interfacing with the NRC regarding deviations from license conditions or technical specifications (10 CFR 50.54).

NOTE

The ED will advise the ESD when such deviations are being planned and the technical organization will be used to the fullest extent possible.

- If the ED decides to transfer responsibility for "Approving and directing official notifications to offsite agencies", perform the following
 - a. Log the decision in the ESD log
 - b. Direct the EOF Communications Coordinator to obtain a turnover from the communicator making notifications in the ECC.
- Announce on the intercom that the EOF is operational

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II. EOF OPERATION

NOTE

The following steps are not presented in the exact sequence that they are to be performed. It is likely that some steps may be performed out of the sequence listed and that some steps will be performed concurrently. Steps that are not applicable for the present situation may be skipped. Other steps may need to be repeated. This exhibit should be referred to periodically to ensure that necessary actions are not missed.

- _____ a. Personally, if possible, inform the Chief Nuclear Officer
 - Status of the EOF
 - Status of the Emergency

- _____ b. The ESD is responsible for authorizing personnel to work in site facilities (EOF, EACC, JIC) during an emergency if they are not Fit for Duty (FFD).
 - Fitness for Duty criteria are stated in Exhibit 9A.

- c. **ESD Conferences**
 - ESD conferences are periodically (Typically once per hour or as conditions change) held for information exchange
 - a. The ESD Assistant is in charge of EOF activities during the ESD conference.
 - b. The ESD Assistant will interrupt the conference if a major plant change occurs.
 - ESD conference attendance should include the following:
 - a. State Representatives
 - BRP
 - PEMA
 - b. NRC
 - Site Team Leader
 - Director Site Operations
 - c. Group Leader R & EC

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- d. Technical Support Representative
- e. Public Information Representative - EOF
- f. Group Leader Admin Support
- g. Emergency Preparedness Representative
- Suggested structure for the first conference
 - a. Get information from the lead personnel
 - Obtain input from State Representative(s)
 - Obtain input from NRC
 - b. Summarize the status
 - c. Discuss the prognosis of where the plant is heading
 - d. Discuss mitigating activities underway, planned or needed
 - e. Discuss what can go wrong and the consequences
 - f. Potential PAR if General Emergency is declared.
 - g. This conference constitutes the briefing of the State Representative
- Conference Action Items
 - a. Action Items shall be logged
 - b. Action Items shall be tracked
 - c. Action items are to be discussed at subsequent conferences until they are resolved.

EOF Briefings

- a. EOF briefings are accomplished using the EOF intercom.
 - Use Exhibit 5 to enhance briefing

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ESD Press Release

- a. Press Releases SHOULD be issued within one (1) hour from the time a plant event has occurred; therefore a TIMELY review is required.
 - The ESD must approve Press Releases that are not boilerplate
 - a. The Press Release Guidance (Exhibit 13) should be followed.
 - b. The Group Leader R & EC SHALL review and concur with the Press Release, before ESD approval.
 - c. The Technical Support Representative SHALL review and concur with the Press Release, before ESD approval.
 - d. The Security Coordinator SHALL review and concur with any Press Release containing SAFEGURADS INFORMATION, before ESD approval.

NOTE

1. Information Releases (e.g., Media Advisories, Emergency Reclassifications) which merely provide standard non-technical information need not have ED/ESD approval
2. DO NOT include the PAR in a Press Release.

- b. If MEDIA access to the site is required, refer to Exhibit 14, "Site Access Policy for Media during Emergencies."

Onsite Protective Actions

- _____ a. Determine the status of site accountability from the Group Leader Admin Support
 - Emergency Director (ED) can supply this information if the Group Leader Admin position is not staffed.
- b. Determine if site evacuation has been ordered.
 - _____ • Ensure provisions are made for providing site employees with instructions for reporting to work for the next business day.

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- c. If any, of the TMI Emergency Response Facilities are downwind of a radioactive release.
- Provide for their monitoring and protection
 - Evacuation orders, for the general public, do not apply to the RAA. This facility would be relocated, if needed, based on advice from the Group Leader R&EC.

Changes to Emergency Classifications

- a. Review EPIP-TMI-.01 to determine when a change in emergency classification is warranted.
- Discuss the change in Emergency Classification with the Emergency Director.
- b. If the "Approving and directing off-site notification to off-site agencies" responsibility has been transferred to the ESD, then proceed with this section, if NOT, go to step 7.0

NOTE

The ESD may overrule the ED and direct that the ED declare a higher level of emergency.

- Immediately complete an Emergency Report Form.

NOTE

a. The form may be completed by an ESD Assistant or EP Rep.

b. Notifications SHOULD be started within 5 minutes of an event declaration (i.e., General Emergency) and SHALL be made within 15 minutes of the declaration.

- a. Complete page 1 and 2 of the Emergency Report Form-TMI
(Refer to Exhibit 2, for a sample of the form).
- b. Use Exhibit 3 for the EAL and Event description
- The Event description must contain the following information from Exhibit 3.
 - a. EAL number
 - b. EAL title
 - c. Additionally, include information about the plant status (e.g., Power Operations, Hot Shutdown, etc.).

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- Approve the Emergency Notification
- Direct the EOF Communications Coordinator to initiate off-site agency notification using the completed Page 1 of the Emergency Report Form-TMI.
- Inform the Emergency Director to make the appropriate plant page announcement.
- Inform the State Representative(s)
 - a. Level of Emergency Declared
 - b. Basis for the declaration

Offsite Protective Action Recommendations (PAR)

a. At the **SITE AREA EMERGENCY**

- _____ • Convene an ESD conference
 - a. Refer to step 2.3 of this exhibit
- _____ • Determine what could lead to a General Emergency by reviewing the EALs in EPIP-TMI-.01
- _____ • Review the PAR Logic Diagram (Exhibit 8) and determine the most likely PAR, in preparation for a GENERAL EMERGENCY declaration
- _____ • Discuss the PAR with the following:
 - _____ a. PEMA representative at the EOF
 - _____ b. BRP representative at the EOF
 - _____ c. NRC representative at the EOF
 - _____ d. Emergency Director

b. At the **GENERAL EMERGENCY**

- If you have assumed the "Approving and directing official notifications to off-site agencies" then complete Step 6.0.

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- Immediately convene an ESD conference to agree upon a PAR
 - a. If a likely PAR was developed earlier, quickly verify that it is still appropriate
 - b. If a likely PAR was NOT developed earlier, determine the PAR from Exhibit 8
 - c. Present the developed PAR to the following:
 - PEMA representative at the EOF
 - BRP representative at the EOF
(This fulfils the obligation to notify the BRP)
 - NRC representative at the EOF

NOTE

ESD SHALL communicate the PAR developed by the TMI emergency organization whether or not PEMA, BRP or NRC representatives at the EOF agree with the developed PAR.

NOTE

To the maximum extent possible, obtain agreement from the State and NRC on the PAR Whether or not the State and NRC agree SHALL NOT impact communication of the PAR recommendation.

- Personally provide TMI's PAR to the SENIOR OFFICAL at the STATE EOC (Emergency Operations Center) within 15 minutes of the General Emergency declaration by one of the following methods:

NOTE

Verify that you are speaking to the SENIOR OFFICAL at the State EOC when providing the PAR.

- a. Pennsylvania Governor (717) 651-2148
- b. State EOC (717) 651-2011
- c. PEMA Notification Line (DLM-6), PEMA, Dial 37

NOTE

If the ESD cannot make the call personally, he may designate someone else to convey the PAR.

- Briefly inform the ED of the PAR decision, do not delay the PAR notification process.
- Inform the ED of the Protective Actions implemented by the State.

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NRC Interface

a. Review Exhibit 16, "TMI / NRC Emergency Response Interface".

- _____ • Ask the Senior NRC person who is the Site Team Leader and who is the Director Site Operations.

NOTE

ONLY the Director Site Operations is empowered to issue directives.

- _____ • Verify that the EP Representative has briefed the NRC on the following:
 - a. Status of the event
 - b. Structure of the TMI organization
 - c. Any NRC directives are to be in writing to the ESD or in the absence of the ESD the ED.
- _____ • Verify that the EP Representative has introduced TMI personnel to their NRC counterparts in the EOF.

Long-Term Recovery

a. Discuss implementation of EPIP-TMI-.45, Classified Emergency Termination/Recovery

- _____ • At an ESD conference
- _____ • With the ED

NOTE

If a GENERAL EMERGENCY is in effect, DO NOT de-escalate to a lower level of emergency. The only option is to go into Long-Term Recovery and this transition SHALL NOT occur until ALL Offsite protective measures have been completed and the State has been notified.

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Close Out / Deactivation

a. Upon any of the following conditions:

- Emergency Close Out
- Deactivation of the EOF
- Deactivation of the EACC

_____ i. An inventory of the EOF is required to be performed by the end of the working day following the end of the event. The inventory is the responsibility of the Emergency Preparedness Manager, TMI. Notify the Emergency Preparedness Manager of the need to perform the inventory in accordance with TEP-ADM-1300.01, Maintaining Emergency Preparedness.

_____ ii. An inventory of the EACC is required to be performed by the end of the working day following the end of the event. The inventory is the responsibility of the Environmental Radioactivity Laboratory Manager. Notify the Environmental Radioactivity Laboratory Manager of the need to perform the inventory in accordance with TEP-ADM-1300.01, Maintaining Emergency Preparedness.

NAME _____ TIME _____ hours DATE _____
 Emergency Support Director

EXHIBIT 2

AmerGen <small>A PECO Energy/Alliant Energy Company</small>	EMERGENCY REPORT FORM - TMI <small>(Press Firmly and Write Clearly)</small>	Part 1 of 4 Call Out/Notification
(Select one) <input type="checkbox"/> LEVEL 1 Onshift (Required for Unusual Event) <input type="checkbox"/> LEVEL 2 Initial Response Emergency Organization & Onshift (Required for Alert) <input type="checkbox"/> LEVEL 3 Emergency Support Organization & Initial Response Emergency Organization & Onshift (Required for SAE & GE)		
Start Here for Notifications Read message - slowly - clearly.		
(Select) <input type="checkbox"/> This is a drill. This is a drill. <input type="checkbox"/> This is NOT a drill. This is NOT a drill.		
Completed by Communicator This is _____ at TMI, my phone number is (Select) 944 _____ <small>Name Extension</small>		
EMERGENCY CLASSIFICATION		
(Select One) <input type="checkbox"/> An Unusual Event has been declared <input type="checkbox"/> A Site Area Emergency has been declared <input type="checkbox"/> An Alert has been declared <input type="checkbox"/> A General Emergency has been declared <input type="checkbox"/> The event has been terminated		
at _____ hours on _____ <small>Emergency Classification Time (24 hour clock) Emergency Classification Date</small>		
(Select) This represents: <input type="checkbox"/> An initial Classification Status <input type="checkbox"/> An escalation in Classification Status <input type="checkbox"/> No change in Classification Status <input type="checkbox"/> A reduction in Classification Status		
EVENT DESCRIPTION		
(Select) <input type="checkbox"/> EAL (Initial) <input type="checkbox"/> EAL (Ongoing) <input type="checkbox"/> EAL (End) and plant status:		
There is: <input type="checkbox"/> No abnormal radioactive <input type="checkbox"/> An abnormal radioactive airborne <input type="checkbox"/> An abnormal radioactive liquid release to the environment as a result of this emergency.		
MUSTER/EVACUATION		
RECOMMENDATION		
(Select One) <input type="checkbox"/> EVACUATE the 5 mile radius around the plant and SHELTER the 5 to 10 mile radius around the plant <input type="checkbox"/> SHELTER the 10 mile radius around the plant (Use SHELTER ONLY option when it is clear that EVACUATION is NOT appropriate)		
METEOROLOGICAL CONDITIONS		
Wind direction is from _____ and the wind speed is _____ miles per hour.		
(Select) <input type="checkbox"/> This is a drill. This is a drill. <input type="checkbox"/> This is NOT a drill. This is NOT a drill.		
Approved - ED/ESD _____		



AmerGen <small>A PECCO Energy/British Energy Company</small>	EMERGENCY REPORT FORM - TMI	Part 2 of 4 Contact
EMERGENCY CLASSIFICATION		
(Info only) <input type="checkbox"/> LEVEL 1 Onshift <input type="checkbox"/> LEVEL 2 Initial Response Emergency Organization & Onshift <input type="checkbox"/> LEVEL 3 Emergency Support Organization & Initial Response Emergency Organization & Onshift		
Start Here for Contact Read Message - slowly - clearly.		
<input type="checkbox"/> This is a drill. This is a drill. <input type="checkbox"/> This is NOT a drill. This is NOT a drill.		
EMERGENCY CLASSIFICATION		
<input type="checkbox"/> An Unusual Event has been declared <input type="checkbox"/> An Alert has been declared <input type="checkbox"/> The event has been terminated		
at _____ hours on _____ <i>Emergency Classification Time</i> <i>Emergency Classification Date</i>		
This represents: <input type="checkbox"/> An initial Classification Status <input type="checkbox"/> No change in Classification Status		
<input type="checkbox"/> A Site Area Emergency has been declared <input type="checkbox"/> A General Emergency has been declared <input type="checkbox"/> A reduction in Classification Status		
EVENT DESCRIPTION		
<div style="border: 1px solid black; padding: 5px;"> <p>There is: <input type="checkbox"/> No abnormal radioactive <input type="checkbox"/> An abnormal radioactive airborne <input type="checkbox"/> An abnormal radioactive liquid release to the environment as a result of this emergency.</p> </div>		
<input type="checkbox"/> This is a drill. This is a drill. <input type="checkbox"/> This is NOT a drill. This is NOT a drill.		
Approved - ED/ESD		



EXHIBIT 3

EAL	BRIEF TITLE	EVENT DESCRIPTION
U1.1	Radiological Effluent Limits Are Being Exceeded	<i>An Unusual event is declared because an abnormal release of radiation from the power plant has or will exceed 60 minutes and could lead to very low level radiation dose rates at or beyond the outer boundary of the plant site.</i>
U1.2	Unexpected Radiation Readings Inside the Power Plant	<i>An Unusual Event is declared because of abnormally high radiation levels measured inside the power plant that indicates a degradation in the control of radioactive material. No abnormal releases to the environment are occurring.</i>
U1.3	Liquid Radioactive Release That Exceeds Limits	<i>An Unusual Event is declared because a release of radioactive liquid that exceeds the limits of government regulations has lasted for 60 minutes or more. This event indicates a degradation in the ability to control the release of radioactive materials to the river.</i>
U1.4	Low Spent Fuel Pool Level	<i>An Unusual Event is declared because of the uncontrolled leakage of water from the Spent Fuel Pool. The leakage exceeds or is expected to exceed the ability to refill the pool. No abnormal releases of radioactivity to the environment are occurring.</i>
U1.5	Low Fuel Transfer Canal Level	<i>An Unusual Event is declared because of the uncontrolled leakage of water from the Fuel Transfer Canal. The leakage exceeds or is expected to exceed the ability to refill the canal. No abnormal releases of radioactivity to the environment are occurring.</i>
U1.6	Fuel Clad Damage With Increased Radiation	<i>An Unusual Event is declared because of indications that there has been damage to the metal tubes that hold the nuclear fuel pellets. Increased radiation has been detected in the water that flows through the nuclear reactor. No abnormal releases of radioactivity to the environment are occurring.</i>
U2.1	Potential Loss or Loss of Containment	<i>An Unusual Event is declared because of the: Potential Loss of Containment as a Fission Product Barrier. - OR - Loss of Containment as a Fission Product Barrier.</i>
U2.2	Reactor Coolant System or Steam Generator Leakage	<i>An Unusual Event is declared because of: an unidentified leak (location unknown) greater than or equal to 10 gallons a minute from the Reactor Coolant System. - OR - an unidentified leak (location unknown) greater than or equal to 10 gallons a minute from the Steam Generator tubes. - OR - an identified leak (location known) greater than or equal to 25 gallons a minute from the Reactor Coolant System.</i>
U3.1	A Risk of Station Blackout Exists - Backup Power Is Available.	<i>An Unusual Event is declared because of the loss of all normal electrical power sources for to the power plant for more than fifteen minutes. Emergency backup power is available.</i>
U3.3	Loss of "A" or "B" Plant DC Electricity For More than 15 Minutes during Cold Shutdown or Refueling Shutdown.	<i>An Unusual Event is declared because of the loss of ALL of the DC (Direct Current) electrical power supply for more than fifteen minutes.</i>

Enter the EAL number AND the Brief Title (This is the **bold** information) in the Event Description area of the EMERGENCY REPORT FORM - TMI.

EXHIBIT 3

EAL	BRIEF TITLE	EVENT DESCRIPTION
U4.1	Unplanned Loss of Control Room Safety Indicators	<i>An Unusual Event is declared because of the unplanned loss of the majority of the control room's Safety Related Equipment alarms - or - indications. Although other non-alarming indications are available to the Control Room Operators, this situation requires increased surveillance of the safety related equipment and there is the risk that a degraded plant condition could go undetected.</i>
U4.1.1	Unplanned Loss of Onsite or Offsite Communications.	<i>An Unusual Event is declared because of the unplanned loss of all onsite communications capabilities. - OR - all offsite communications capabilities.</i>
U4.2	Failure to Complete a Plant Shutdown or Cooldown Within the Required Time Limit.	<i>An Unusual Event is declared because the required time limit to perform a plant shutdown - OR - a plant cooldown was exceeded. The Technical Specifications are the power plant's operational guidelines. A Limiting Condition for Operation (LCO) sets a specific time limit that allows continued plant operation while actions are being taken to correct the problem. If the problem cannot be corrected and the plant cannot be shut down or cooled down within the time limit, an Unusual Event must be declared.</i>
U5.1	High River Water Level.	<i>An Unusual Event is declared because flood waters are within a few feet of the top of the stone dike that surrounds the power plant. Water is NOT flooding onto the plant site.</i>
U5.2	High Wind Speeds Near Hurricane Force	<i>An Unusual Event is declared because of Sustained Winds greater than 70 mph recorded at TMI. These winds have the potential to damage Plant Equipment.</i>
U5.3	Tornado Strikes Protected Area.	<i>An Unusual Event is declared because of a report that a tornado touched down inside the Protected Area of the power plant. There is the potential for damage to structures and equipment inside the Protected Area.</i>
U5.4	Earthquake At Threshold Levels.	<i>An Unusual Event is declared because of a minor earthquake detected at the power plant. An earthquake of this magnitude has the potential to damage some equipment, but it is not expected to affect any safety systems. The occurrence of any detectable earthquake warrants increased monitoring by the operators.</i>
U6.1	Fire In The Protected Area.	<i>An Unusual Event is declared because of a fire in the Protected Area of the power plant that our site Fire Brigade could not bring under control within 15 minutes of when the fire was confirmed. This fire has the potential to involve Safety Related Equipment if it spreads.</i>
U6.3	Flammable / Toxic Gas That May Affect Operation.	<i>An Unusual Event is declared because of the detection of flammable / toxic gas that could enter the power plant site. This gas could affect the safety and health of plant personnel and disrupt normal operation of the power plant.</i>

Enter the EAL number AND the Brief Title (This is the **bold** information) in the Event Description area of the EMERGENCY REPORT FORM - TMI.

EXHIBIT 3

U6.4	Unexpected Explosion In The Protected Area.	<i>An Unusual Event is declared because of an unexpected explosion that caused damage inside the Protected Area of the power plant. This explosion was NOT caused by a bomb. The damage could affect the operation of the plant.</i>
U6.5	Steam Turbine Damage.	<i>An Unusual Event is declared because of damage to the steam turbine, including puncturing of the steel casing around the turbine or damage to the generator seals. The hazard of projectiles from the turbine and puncturing of the casing around it decreases the safety level of the plant and could affect the safety and health of plant personnel which affects the operation of the power plant.</i>
U6.6	Vehicle Crash In The Protected Area.	<i>An Unusual Event is declared because of a vehicle (airplane, train, helicopter, etc.) that accidentally crashed inside the Protected Area of the power plant. There is the potential for damage to structures and equipment inside the Protected Area.</i>
U7.1	Confirmed Security Event.	<i>An Unusual Event is declared because of a confirmed security event, which could potentially degrade the safety level of the power plant. (This event involves: A bomb discovered inside the Protected Area The Protected Area includes major plant structures like the turbine and service buildings that are protected by a security fence and to which access is controlled.) - OR - A Hostile Force inside the Owner Controlled Area (The Owner Controlled Area includes the area between the perimeter chain link fence and the Protected Area).</i>
U8.1	Judgment of the Shift Manager / Emergency Director - Potential Degradation of Plant Safety	<i>An Unusual Event is declared by the Shift Manager / Emergency Director. The Shift Manager / Emergency Director has the flexibility to declare an event if conditions exist that indicate a potential decrease in the safety level of the plant. These conditions may not be specifically addressed in an emergency procedure. In this situation, the decision to declare an emergency relies on the judgment of the Shift Manager / Emergency Director.</i>

Enter the EAL number AND the Brief Title (This is the **bold** information) in the Event Description area of the EMERGENCY REPORT FORM - TMI.

EXHIBIT 3

EAL	BRIEF TITLE	EVENT DESCRIPTION
A1.1	Radiological Effluent Limits Are Being Significantly Exceeded.	<i>An Alert is declared because an abnormal release of radiation from the power plant has or will exceed 15 minutes and could lead to low level radiation dose rate at or beyond the outer fence line of the plant site.</i>
A1.2	Unexpected Radiation Readings Inside the Power Plant that Affect the Safe Operation of the Plant.	<i>An Alert is declared because of abnormally high radiation levels measured inside the power plant, which indicate a serious degradation in the control of radioactive material.</i>
A1.3	Liquid Radioactive Release That Significantly Exceeds Limits.	<i>An Alert is declared because a release of radioactive liquid that significantly exceeds the limits of government regulations has lasted for 15 minutes or more.</i>
A1.4	Low Spent Fuel Pool Level With Increased Radiation Levels.	<i>An Alert is declared because of the uncontrolled leakage of water from the Spent Fuel Pool with higher than normal radiation levels in the spent fuel pool area of the plant. This condition indicates a serious degradation in the control of radioactive material.</i>
A1.5	Low Fuel Transfer Canal Level With Increased Radiation Levels.	<i>An Alert is declared because of the uncontrolled leakage of water from the Fuel Transfer Canal with higher than normal radiation levels in the reactor building. This condition indicates a serious degradation in the control of radioactive material.</i>
A2.1	Potential Loss or Loss of the Fuel Clad - OR - the Reactor Coolant System.	<i>An Alert is declared because ONE Fission Product Barrier (other than Containment) has been impacted due to the: Potential Loss of the Fuel Clad Fission Product Barrier - OR - the Reactor Coolant System Fission Product Barrier. - OR - Loss of the Fuel Clad Fission Product Barrier - OR - the Reactor Coolant System Fission Product Barrier.</i>
A3.1	A Risk of Station Blackout Exists - Limited Backup Power Is Available.	<i>An Alert is declared because of the loss of all normal electrical power sources for the power plant for more than fifteen minutes. Only one of several sources of emergency electrical power sources is available.</i>
A3.2	Prolonged Station Blackout - Greater than 15 minutes - During Cold Shutdown or Refueling Shutdown.	<i>An Alert is declared because of the loss of all normal electrical power sources - AND - the loss of all emergency electrical power sources for more than fifteen minutes (a prolonged Station Blackout) during Cold Shutdown or a Refueling Shutdown.</i>
A4.1	Unplanned Loss of Control Room Safety Indicators With Transient	<i>An Alert is declared because of the unplanned loss of the majority of the control room's Safety Related Equipment alarms - or - indications. - AND - The loss of other non-alarming indications. - OR - A significant change in the power plant's status is in progress. This situation requires increased surveillance of the safety related equipment in order to safely operate the power plant and there is the risk that a degraded plant condition could go undetected.</i>

Enter the EAL number AND the Brief Title (This is the **bold** information) in the Event Description area of the EMERGENCY REPORT FORM - TMI.

EXHIBIT 3

EAL	BRIEF TITLE	EVENT DESCRIPTION
A4.2	Failure of the Reactor to Automatically Shutdown - AND - a Successful Manual Reactor Shutdown was Accomplished.	<i>An Alert is declared because the Reactor Protection System that is designed to automatically shut down (trip) the reactor failed to do so. The Control Room Operators have manually shut down (tripped) the reactor, but the failure of the automatic system degrades the safety level of the power plant.</i>
A4.3	Loss of All Means of Decay Heat Removal and the Nuclear fuel is Predicted to be Uncovered.	<i>An Alert is declared because the operators are unable to provide sufficient cooling water to the reactor following a plant shutdown. This condition reduces the ability of the operators to keep the nuclear fuel cool and degrades the safety level of the power plant.</i>
A5.1	High River Water Level Near Flood Level.	<i>An Alert is declared because of flood waters that have the potential to flow over the top of the stone dike that surrounds the power plant. Portions of the plant site may be flooded. This flood has the potential to damage Safety Related Equipment.</i>
A5.2	High Wind Speeds Greater Than Hurricane Force.	<i>An Alert is declared because of Sustained Winds greater than 80 mph recorded at TMI. There is the potential for damage to Safety Related Equipment.</i>
A5.3	Tornado Strikes Vital Area.	<i>An Alert is declared because of a report that a tornado touched down and has damaged structures and equipment inside the Vital Area of the power plant. This damage could affect Safety Related Equipment.</i>
A5.4	Earthquake At Operating Design.	<i>An Alert is declared because of an earthquake at the power plant. An earthquake of this magnitude has the potential to damage some Safety Related Equipment that could affect the ability to protect the public's health and safety. The power plant may be shut down and increased monitoring will be performed by the operators.</i>
A6.1	Fire Affecting Safety Related Equipment.	<i>An Alert is declared because of a fire that has affected one of the Safety Related Equipment systems in the Vital Area. (The Vital Area includes structures where safety related equipment is located.) - OR - A fire is in the Protected Area and requires local fire company assistance. The Protected Area includes major plant structures like the turbine and service buildings that are protected by a security fence and to which access is controlled.</i>
A6.2	Control Room Evacuation Initiated.	<i>An Alert is declared because of the order to evacuate the Control Room. The absence of personnel in the control room can affect the safe operation of the power plant.</i>
A6.3	Flammable / Toxic Gas Affects Plant Operation.	<i>An Alert is declared because of life threatening concentrations of flammable / toxic gas within the Vital Area of the power plant. This presence can affect the safety of plant personnel and the operation of Safety Related Equipment. Evacuation of plant personnel is possible.</i>

Enter the EAL number AND the Brief Title (This is the **bold** information) in the Event Description area of the EMERGENCY REPORT FORM - TMI.

EXHIBIT 3

EAL	BRIEF TITLE	EVENT DESCRIPTION
A6.4	Unexpected Explosion In The Vital Area.	<i>An Alert is declared because of an unexpected explosion that caused damage inside the Vital Area of the power plant. This explosion was NOT caused by a bomb. The damage could potentially affect the ability to protect the public's health and safety.</i>
A6.6	Vehicle Crash In The Vital Area.	<i>An Alert is declared because of a vehicle (airplane, train, helicopter, etc.) that accidentally crashed inside the Vital Area of the power plant. The damage could affect Safety Related Equipment.</i>
A7.1	Confirmed Security Event Potentially Affecting Safety Related Equipment.	<i>An Alert is declared because of a confirmed security event, which degrades the safety level of the power plant. This event involves: A bomb discovered inside the Vital Area. The Vital Area includes buildings where Safety Related Equipment is located. Damage to this equipment would reduce the ability to protect the public's health and safety. - OR - A Hostile Force inside the Protected Area. The Protected Area includes major plant structures like the turbine and service buildings that are protected by a security fence and to which access is controlled.</i>
A8.1	Judgment of the Shift Manager / Emergency Director – Actual Degradation of Plant Safety.	<i>An Alert is declared by the Shift Manager / Emergency Director. The Shift Manager / Emergency Director has the flexibility to declare an event if conditions exist that indicate a potential substantial decrease in the safety level of the plant. These conditions may not be specifically addressed in an emergency procedure. In this situation, the decision to declare an emergency relies on the judgment of the Shift Manager / Emergency Director.</i>

Enter the EAL number AND the Brief Title (This is the **bold** information) in the Event Description area of the EMERGENCY REPORT FORM - TMI.

EXHIBIT 3

EAL	BRIEF TITLE	EVENT DESCRIPTION
S1.1	High Radiological Doses at the Boundary of the Power Plant	<i>A Site Area Emergency is declared because an abnormal release of radiation from the power plant could lead to significant doses of radiation at the boundary of the power plant.</i>
S2.1	Potential Loss or Loss of the Fuel Clad - AND - Potential Loss or Loss of the Reactor Coolant System	<i>A Site Area Emergency is declared because TWO of the Fission Product Barriers have been impacted due to the: Loss of the Fuel Clad Fission Product Barrier - AND - the Potential Loss of the Reactor Coolant System Fission Product Barrier. - OR - Potential Loss of the Fuel Clad Fission Product Barrier - AND - the Potential Loss of the Reactor Coolant System Fission Product Barrier. - OR - Potential Loss of the Fuel Clad Fission Product Barrier - OR - the Potential Loss of the Reactor Coolant System Fission Product Barrier - AND - the Loss of Any Other Fission Product Barrier.</i>
S3.1	Prolonged Station Blackout - Greater than 15 Minutes.	<i>A Site Area Emergency is declared because of the loss of all normal electrical power sources for the power plant for more than fifteen minutes - AND - the loss of all emergency electrical power sources for more than fifteen minutes. This is called a Station Blackout.</i>
S3.3	- Loss of All Plant DC Electricity For More than 15 Minutes when the plant is not in Cold Shutdown or Refueling Shutdown.	<i>A Site Area Emergency is declared because of the loss of all DC (Direct Current) electrical power for more than fifteen minutes.</i>
S4.1	Unplanned Loss of All Control Room Safety Indicators With Transient	<i>A Site Area Emergency is declared because of the unplanned loss of all Safety Related Equipment indications and alarms - AND - A significant change in the power plant's status is in progress. The control room staff is unable to adequately monitor the systems necessary to safely control the power plant and insure protection of the public's health and safety.</i>
S4.2	Failure of the Reactor to Automatically Shutdown - AND - a Manual Reactor Shutdown could not be Accomplished.	<i>A Site Area Emergency is declared because the Reactor Protection System that is designed to automatically shut down (trip) the reactor failed to do so AND the Control Room Operators were unable to manually shut down (manually trip) the reactor from the control room. This condition reduces the ability of the operators to control the power plant and creates conditions that could lead to damage of the nuclear fuel or the steel reactor vessel and associated piping. This condition impacts the ability to protect the health and safety of the public.</i>

Enter the EAL number AND the Brief Title (This is the **bold** information) in the Event Description area of the EMERGENCY REPORT FORM - TMI.

EXHIBIT 3

EAL	BRIEF TITLE	EVENT DESCRIPTION
S4.3	Loss of All Means of Decay Heat Removal - AND - Indications that the Nuclear fuel is Uncovered.	<i>A Site Area Emergency is declared because the operators are unable to provide sufficient cooling water to the reactor following a plant shutdown - AND - the increased heat has caused the water in the reactor to boil and uncover the fuel. This condition reduces the ability of the operators to keep the nuclear fuel cool, degrades the safety level of the power plant and decreases the ability to protect the public's health and safety.</i>
S4.4	Loss of Both Methods Needed to Maintain the Nuclear Reactor in Hot Shut Down.	<i>A Site Area Emergency is declared because of the loss of the ability to cool the reactor after it is shut down. This condition reduces the ability of the operators to keep the nuclear fuel cool and degrades the safety level of the power plant and the ability to protect the public's health and safety.</i>
S6.2	Control Room Evacuation Completed Without Complete Plant Control	<i>A Site Area Emergency is declared because of the evacuation of the Control Room - AND - the inability to confirm effective cooling of the nuclear fuel within 15 minutes. The absence of personnel in the control room and the lack of effective cooling of the nuclear fuel can affect the operation of Safety Related Equipment and the ability to protect the public's health and safety.</i>
S7.1	Confirmed Security Event Affecting Safety Related Equipment.	<i>A Site Area Emergency is declared because of a confirmed security event that degrades the safety level of the power plant and the ability to protect the public's health and safety. This event involves: A bomb that has exploded inside the Vital Area. The Vital Area includes buildings where Safety Related Equipment is located. Damage to this equipment would reduce the ability to protect the public's health and safety. - OR - A Hostile Force inside the Vital Area.</i>
S8.1	Judgment of the Shift Manager / Emergency Director - Actual Failures of Safety Systems.	<i>A Site Area Emergency is declared by the Shift Manager Emergency Director. The Shift Manager Emergency Director has the flexibility to declare an event if conditions exist that indicate the likely or actual major failure of plant functions needed to protect the public's health and safety. These conditions may not be specifically addressed in an emergency procedure. In this situation, the decision to declare an emergency relies on the judgment of the Shift Manager Emergency Director.</i>

Enter the EAL number AND the Brief Title (This is the **bold** information) in the Event Description area of the EMERGENCY REPORT FORM - TMI.

EXHIBIT 3

EAL	BRIEF TITLE	EVENT DESCRIPTION
G1.1	High Radiological Doses at the Boundary of the Power Plant that Exceed Protective Action Guideline (PAG) Limits.	<i>A General Emergency is declared because an abnormal release of radiation from the power plant that could lead to high doses of radiation at the boundary of the power plant. This condition may require that protective actions be implemented for members of the public living around Three Mile Island.</i>
G2.1	Loss of ANY TWO of the Fission Product Barriers – AND – the Potential Loss of the third.	<i>A General Emergency is declared because TWO of the Fission Product Barriers have been Lost and there is at least the Potential Loss of the third barrier.</i>
G3.1	Prolonged Station Blackout – Greater than 4 hours.	<i>A General Emergency is declared because of the loss of all normal electrical power sources for the power plant for more than four hours - AND - the loss of all emergency electrical power sources for more than four hours (a prolonged Station Blackout) - AND - the overheating of the nuclear fuel.</i>
G4.2	Failure of the Reactor to Automatically Shutdown - AND – a Manual Reactor Shutdown could not be Accomplished - AND – Operators are Unable to Cool the Nuclear fuel	<i>A General Emergency is declared, because the Reactor Protection System that is designed to automatically shut down (trip) the reactor failed to do so AND, the Control Room Operators were unable to manually shut down (manually trip) the reactor from the control room AND, the operators are unable to cool the nuclear fuel.</i>
G7.1	Confirmed Security Event Loss of Plant Control.	<i>A General Emergency is declared because of a confirmed security event that prevents the operators from being able to place the power plant in Cold Shutdown. This condition seriously degrades the safety level of the power plant and the ability to protect the public's health and safety. This event involves: The loss of physical control of the Control Room. - OR - The loss of physical control of the Remote Shutdown Control Area.</i>
G8.1	Judgment of the Shift Manager / Emergency Director - Safety System Failures and Potential Radioactive Release.	<i>A General Emergency is declared by the Shift Manager / Emergency Director. The Shift Manager / Emergency Director has the flexibility to declare an event if conditions exist that could result in substantial fuel damage and a substantial uncontrolled radiation release. - OR - have resulted in substantial fuel damage and a potential uncontrolled radiation release.</i>

Enter the EAL number AND the Brief Title (This is the **bold** information) in the Event Description area of the EMERGENCY REPORT FORM - TMI.

EXHIBIT 4

*** INFORMATION REGARDING PARs, NOT FOR PUBLIC RELEASE ***

PAR has been provided to the STATE

YES (✓)		NO (✓)		N/A (✓)	
---------	--	--------	--	---------	--

If YES, PAR RECOMMENDED

PROTECTIVE ACTION IMPLEMENTED BY THE STATE, IF KNOWN

PLANT STATUS

REACTOR STATUS

POWER OPERATION

- _____ % POWER STEADY STATE MANUAL SHUTDOWN @ _____ %/min
 HOT STANDBY HOT SHUTDOWN

SHUTDOWN

- REACTOR TRIP _____ AUTOMATIC _____ MANUAL

COOLDOWN

- COOLDOWN @ _____ °F/hr via
 FORCED CIRC with _____ PUMPS NATURAL CIRC with _____ ΔT
 Other (Explain) _____

COLD SHUTDOWN

- DHR 'A' DHR 'B' LPI 'A' LPI 'B'
 OTHER (Specify) _____

ELECTRICAL STATUS

- System GRID
 Main Generator
 Emergency Diesels 'A' 'B' SBO
 Battery 'A' 'B'
 OTHER (Specify) _____

EXHIBIT 4

FISSION PRODUCT BARRIER STATUS

REACTOR COOLANT SYSTEM

Barrier	INTACT (√)	POTENTIAL LOSS (√) /	Leak rate (gpm), If KNOWN	LOSS (√) /	Leak rate (gpm), If KNOWN
RCS (NOT OTSG)		/		/	
OTSG 'A'		/		/	
OTSG 'B'		/		/	

CONTAINMENT BUILDING

Barrier	INTACT (√)	POTENTIAL LOSS (√)	LOSS (√)
Building Integrity			
Bypass RB (e.g., OTSG leak to atmos.)			

FUEL CLAD INTEGRITY

Barrier	INTACT (√)	POTENTIAL LOSS (√)	LOSS (√)
Clad			

EMERGENCY SYSTEMS ACTUATED

- NONE
- EMERGENCY FEEDWATER (EFW)
- HIGH PRESSURE INJECTION (HPI)
- CORE FLOOD (CF)
- LOW PRESSURE INJECTION (LPI)
- REACTOR BUILDING SPRAY (BS)

PROBLEMS AT UNIT 2

OPEN TECHNICAL ISSUES (Provide specific details, including priority)

EXHIBIT 4

RADIOLOGICAL CONDITIONS

Is an abnormal, unplanned or uncontrolled release (monitored or unmonitored) in progress or suspected?

YES NO N/A

If YES, specify the release pathway:

If YES, describe release type:

Airborne release Liquid release Unknown
 Other (Specify)

Have Field Monitoring Teams (FMT) been dispatched? YES NO

Have abnormal ON SITE or OFF SITE radiological conditions been detected by:

Reuter Stokes Field Monitoring Team

Details:

Abnormal radiation levels IN PLANT: YES NO

Details (Location):

HAZMAT

A HAZARDOUS MATERIAL EVENT HAS OCCURRED (See 1203-44) YES NO

HAS ENVIRONMENT AFFAIRS BEEN INFORMED? YES NO

HAS THE HAZARDOUS MATERIAL ENTERED THE RIVER? YES NO

DETAILS (Location, Chemical, actions taken, etc.)

EXHIBIT 4

PERSONNEL STATUS

PERSONNEL INJURED YES HOW MANY _____ NO
INJURED & CONTAMINATED YES HOW MANY _____ NO
TRANSPORT OFFSITE YES HOW MANY _____ NO
SPECIFY THE OFFSITE FACILITY _____

PERSONNEL CONTAMINATED YES HOW MANY _____ NO
DETAILS:

IS ONSITE ACCOUNTABILITY REQUIRED? YES NO
IF YES, IS IT COMPLETE? YES NO
IS NON-ESSENTIAL PERSONNEL MUSTER REQUESTED? YES NO
IF YES, LOCATION; _____
HAVE NON-ESSENTIAL PERSONNEL BEEN EVACUATED? YES NO
IF YES, LOCATION; _____

OTHER ISSUES

DETAILS (Security, 10CFR50.54(x), etc.)

FORM COMPLETED BY _____ DATE _____ TIME _____
(NAME)

	TMI - Unit 1 Emergency Plan Implementing Document	Number EPIP-TMI-.27
Title Emergency Operations Facility	Revision No 15	

EXHIBIT 5

Page 1 of 2

Emergency Support Director Briefing Sheet

NOTE

This checklist may be completed by the ESD Assistant or EP Representative.

NOTE

This checklist may be filled out in any sequence. Items that do not apply to the present situation may be skipped and marked "N/A".

1.0 Conduct a briefing periodically. (Hourly and after significant changes in plant conditions).

Briefing Time _____

a. Emergency classification/emergency organization status

b. Plant status (temperature, pressure, leak rate, equipment status etc.)

RCS Temp	RCS Press	RCP Status
RB Sump	RB Flood	BWST

c. Radiological conditions (specific release pathway, verify release duration, in plant radiological conditions, etc.)

	TMI - Unit 1 Emergency Plan Implementing Document	Number EPIP-TMI-.27
Title Emergency Operations Facility	Revision No 15	

EXHIBIT 5

d. Work in progress (equipment problems, evolutions in progress, etc.)

Priority jobs to mitigate event

1) _____

2) _____

3) _____

4) _____

Other _____

e. Personnel status (muster, accountability, evacuation, contamination, etc.)

f. Security and offsite support (security conditions, required offsite support)

g. Mitigating activities, future plans

	TMI - Unit 1 Emergency Plan Implementing Document	Number EPIP-TMI-.27
Title Emergency Operations Facility	Revision No. 15	

EXHIBIT 6

Page 1 of 2

EOF Access Control Checklist

Initials

- _____ 1.0 Upon arrival at the EOF, request Environmental Radioactivity Lab personnel to unlock the door and keep the Main Gate open.
- _____ 2.0 Ensure all entrances other than the main entrance are locked or have positive access control in order to maintain access control to the EOF.
- _____ 3.0 Activate the DADCO Door Monitor (located at the Main Entrance) by depressing the "Green" power button.
 - _____ a. Locate door number (1) on the alarm panel and place this door in standby mode by depressing the "black" button one time.

NOTE
This will cause the indicator light to switch from solid green to amber.

- _____ b. If an alarm is received on any other alarmed door, silence the alarm by depressing the silence button. This will terminate audible alarm.
- _____ c. Check status of door by depressing black button corresponding to the door one time. If door is open, the amber light will flash. If closed, amber light will remain solid.
- _____ d. If door indicator light is flashing or is solid (amber), notify Group Lead Admin. Support or E.P. Rep. to verify status of door. Request a walkthrough be conducted to verify only authorized personnel are present in the facility.
- _____ e. If door is verified to be secure, reset door by depressing black button corresponding to door, to return indicator button to green secure mode.
- _____ f. If door is unsecure, and must remain open, positive access control shall be determined by Group Leader Admin Support or E.P. Rep.
- _____ 4.0 Obtain the EOF access list from the glass case located next to the name board and ensure all authorized personnel frisk, if necessary.

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**EXHIBIT 7
TMI Access Authorization Checklist**

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NAME: _____ COMPANY: _____

SSN: _____ BADGE #: _____

The criteria identified by this checklist shall be completed and verified prior to authorizing access of NRC personnel during emergency conditions. Deviation from these requirements shall only be permitted at the direction of the Emergency Director, Emergency Support Director or their designee.

NOTE
Complete only the applicable sections of this checklist, mark other sections "N/A" (e.g., mark Section A as N/A for non-NRC personnel).

A. NRC personnel shall be granted unfettered access upon verification of:

- _____ • The representative possesses "Q" or "L" clearance, has been authorized site access by the NRC Region I Office (King of Prussia, PA) or the NRC Headquarters (Rockville, MD) and appears on the current TMI Access Roster/5 SS Screen.
- _____ • The representative possesses a "Q" or "L" clearance, has been authorized access by Regional Office and/or Headquarters, but does not appear on the TMI Access Roster/5 SS terminal. In this case a letter of access authorization shall be forwarded (via telefax) to the Emergency Operations Facility.
- _____ • The representative does not possess a "Q" or "L" clearance and must have an escort for entry into the protected area.

If Step 1 or 2 are complete check box 1 on Access Authorization Form. if only Step 3 is completed, check box 2 on Access Authorization Form.

Verification Signature: _____
Group Leader Admin Support/Designee
Date

All other personnel require Emergency Director, Emergency Support Director or designee authorization and if not fully qualified for unescorted access require a qualified site staff member as an escort.

NOTE
Permission for site entry should be obtained through the ESD Assistant.

B. Rad Con (Non-RWP Access)

- _____ • Complete Temporary Issue Paperwork.
- _____ • Issue TLD.

Verification Signature: _____
Group Leader R&EC/Designee
Date

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C. Rad Con/Training (Escorted RWP Access - No Respirator Areas)

- _____ • Complete Step B.
- _____ • View G.E.T. Film.

NOTE
Both 1/2 inch and 3/4 inch format tapes are stored in the EOF cabinet.

- _____ • Practical Factor Performance not required.
- _____ • Whole Body Count (waived if no facilities available).

Check Box 3 of the Access Authorization Form

Verification Signature: _____
Group Leader R&EC/Designee
Date

D. Rad Con (Unescorted RWP Access - No respirator Areas)

- _____ • Ensure Steps B and C are complete.
- _____ • Complete practical factors.

Individual granted unescorted RWP Access (No Respirator Areas).

Check Box 4 of the Access Authorization Form.

Verification Signature: _____
Group Leader R&EC/Designee
Date

E. Rad Con (Unescorted RWP Access with Respirator)

- _____ • Ensure Steps B, C and D complete.
- _____ • Documentation provided by NRC of satisfactory completion of respiratory medical or receive GPU Nuclear medical.
- _____ • Complete TMI Respirator Training.
- _____ • Complete TMI Respirator Fit Test.

Individual granted unescorted RWP Access to all areas.

Check Box 5 of the Access Authorization Form.

Verification Signature: _____
Group Leader R&EC/Designee
Date

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**EXHIBIT 7A
NRC TMI Access Authorization**

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NAME: _____ SSN: _____

- 1. Authorized unescorted TMI Site Access.
 Authorized by Signature: _____

- 2. Authorized escorted TMI Site Access.
 Authorized by Signature: _____

- 3. Authorized non-respirator RWP Access with an escort.
 Authorized by Signature: _____

- 4. Authorized unescorted non-respirator RWP Access.
 Authorized by Signature: _____

- 5. Authorized to wear the following respirator(s) and unescorted RWP Access.
 Respirator Type _____ Size _____
 Respirator Type _____ Size _____
 Authorized by Signature: _____

Security Badge #: _____ Issued By: _____ Date: _____

NOTE

It is the individual's responsibility to maintain a copy of this form with them at all times. Failure to keep a copy of this form can result in Site/RWP Access being denied.

EXHIBIT 8
TMI Par Logic Diagram

SITE AREA EMERGENCY IS DECLARED

Determine which initial PAR is appropriate if a **GENERAL EMERGENCY** is declared.

(1) Evacuate the 5 mile radius around the plant and shelter the 5 to 10 mile radius around the plant
OR
(2) Shelter the 10 mile radius around the plant

Continue assessment of all available Plant and Field Monitoring information.

GENERAL EMERGENCY IS DECLARED

EVACUATE THE 5 MILE RADIUS AROUND THE PLANT AND SHELTER THE 5 TO 10 MILE RADIUS AROUND THE PLANT UNLESS IT IS KNOWN THAT SHELTERING OF THE 10 MILE RADIUS AROUND THE PLANT WILL OFFER GREATER PROTECTION. (See NOTE below)

CONTINUE ASSESSMENT BASED ON ALL AVAILABLE PLANT DATA AND FIELD MONITORING INFORMATION

Expand EVACUATION recommendation to the 10 mile radius around the plant if VALID dose assessment/measurement information indicates that areas outside the 5 mile radius will exceed 1 REM TEDE or 5 REM CDE (Child Thyroid)

NOTE

- The intent is to evacuate the 5 mile radius around the plant as an initial PAR. The decision to recommend sheltering rather than evacuation should be made **ONLY** when it is clear that the evacuation cannot be completed within the release time. For example, the release has already stopped, the release can be stopped simply by turning off a piece of equipment, or there is a deliberate venting of the Containment Building with more than one valve available for isolation.

SECURITY EVENT

- When **EITHER** the Control Room or the Remote Shutdown area is available the initial PAR should be to **SHELTER** the 10 mile radius around the plant.
- When **BOTH** the Control Room and the Remote Shutdown area are lost the initial PAR should be to **EVACUATE** the 5 mile radius and **SHELTER** the 5 to 10 mile radius around the plant.

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**EXHIBIT 9
EP Representative**

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Activation

1.0 Start log for your position in accordance with EPIP-TMI-.05.

NOTE
Steps a through c may be completed in any sequence. Steps that do not apply to the present situation may be skipped or marked "N/A".

- _____ a. Establish Access Control in accordance with Exhibit 6, EOF Access Control Checklist until relieved by the Group Leader Admin Support.
 - _____ • If an individual is not available to implement Exhibit 6, proceed as follows:
 - i. Insure the door is locked
 - ii. Display a sign stating "Ring doorbell for facility access".

- b. Test ESO personnel who admit to having had a drink in the last five hours in accordance with Fitness for Duty requirements (Exhibit 9A).

- c. Determine if the EOF is 1 hour (from the time displayed on the pager) staffed and ready to be activated.
 - Ensure that personnel properly use the EOF Name Board and are wearing tags to identify the position they are filling.
 - Determine vacant positions by looking at remaining nametags
 - a. Ensure that vacant positions are provided to the EOF Communications Coordinator so that personnel can be contacted to fill the positions.
 - Obtain an activation status report from the following positions:
 - a. ESD Assistant
 - b. Group Leader - Rad and Env Controls
 - c. Technical Support Rep
 - d. Public Information Representative - EOF
 - e. EOF Communications Coordinator
 - f. RAC Line Communicator
 - g. ESD Logkeeper
 - h. EAC

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- _____ d. When all of the above positions are activated, report to the ESD that the EOF is 1 hour staffed and ready to be activated.

2.0 EP Operational Checklist

NOTE

The following steps are not presented in the exact sequence that they are to be performed. It is likely that some steps will have to be performed out of the sequence listed and that some steps will be performed concurrently. Steps that are not applicable for the present situation may be skipped. Other steps may need to be repeated. This exhibit should be referred to periodically to ensure that necessary actions are not missed.

- a. Determine status of the Emergency Response Facilities from the ED Assistant and report the results to the ESD Assistant.
- b. Inform the ESD that the EOF is fully staffed when the Group Leader Administrative Support and supporting staff have arrived.
- c. Advise the ESD and other Emergency Response Organization members on all Emergency Plan related matters.
 - Proper interface with the State and the NRC
 - Proper Emergency Classification Level
 - Proper Protective Action Recommendation
 - Proper use of Emergency Plan Implementing Procedures
 - Offsite notifications (if that responsibility has been transferred to the EOF)
- d. Upon the arrival of the NRC and State personnel
 - Provide a briefing.
 - i. Status of the Event
 - ii. Structure of TMI organization
 - iii. Request directives in writing to the ESD

NOTE

Use completed Exhibit 4 and, if available, Exhibit 5 to enhance the briefings

- Introduce them to their counterparts.

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- Act as the point of contact for the PEMA representative.
- e. Attend all ESD Conferences
 - Log all conference Action Items on conference room status board.
 - Ensure that mitigating activities are discussed.
 - Lead the review of the PAR Logic Diagram.
 - Ensure the State and the NRC are given an opportunity to ask questions.
- f. Determine status of the State and Local Emergency Operations Centers from the PEMA representative and report the results to the ESD Assistant.
- g. Ensure the TMI Emergency Responders Information Brochure (located in the EOF Emergency Supplies Cabinet) are made available to responding government agencies (e.g., NRC, PEMA), industry support groups (e.g., INPO), etc.
- h. If problems are encountered with the Emergency Telephones, contact the EOF Communications Coordinator.
- i. Upon close out of the drill/emergency:
 - Collect all completed EOF logs and forms
 - Collect all EACC logs and forms
 - Provide them to the Emergency Preparedness Department

Name _____ Time _____ Date _____
Emergency Preparedness Representative

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**Emergency Operations Facility
Fitness for Duty Determination Instructions**

NOTE

The fitness for duty rule applies to all TMI employees (including TMI contractors and vendors) granted unescorted access to the protected area or who are required by position or name to report to the EOF. These instructions address their evaluation for utilization in an emergency only. All "for cause" evaluations must be conducted by the Medical or Security Department.

Scope:

In accordance with 1000-ADM-2002.06, Fitness for Duty, individuals responding to an emergency who have consumed alcohol within the previous five hours but believe that they are fit for duty shall inform the Emergency Support Director and receive an evaluation. Contractor/vendor personnel shall be asked if they have consumed alcohol within the previous five hours. If the answer is yes, an evaluation shall be conducted.

Instructions:

The Emergency Support Director shall direct the Emergency Preparedness Representative to administer the breath alcohol evaluation in accordance with Exhibit 9A.

NOTE

Extra copies of ALCO Sensor III operational checklist are kept with the instrument.

Based on the results of the test, perform the following:

- a. BAC 0.01% or less

Allow the individual to work in the facility.

- b. BAC greater than 0.01% but less than 0.04%

Allow the individual to work in the facility. Re-test the individual approximately every thirty minutes to determine the maximum BAC. If the maximum BAC is equal to or greater than 0.04%, refer to Step 3. If less than 0.04%, no further action is required.

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- c. BAC equal to or greater than 0.04%

If determined that the individual's unique knowledge or skills are required, that individual shall only be permitted to work with the permission of the Site Director (or in his/her absence, his/her designee), Emergency Support Director, Emergency Director or Office of the President only after satisfactory assurance that the individual is capable of performing his/her duties. Remind the Emergency Support Director that if this individual is needed to work, he/she must be escorted at all times. Arrangements should be made as soon as practicable for (for cause) testing in accordance with 1000-ADM-2002.06.

NOTE

Individuals not "on call" who report to their facility and test equal to or greater than 0.04 percent BAC are not subject to disciplinary action.

- d. Ensure the individual who tested equal to or greater than 0.04, if not needed, is not permitted to drive home. Provide a place for the individual to rest or contact Group Leader - Admin Support to arrange for transportation.
- e. Be alert for any individual that exhibits aberrant behavior or the smell of alcohol. Test these individuals in accordance with this exhibit. If aberrant behavior cannot be attributed to a positive BAC reading, ask the Group Leader - Admin Support to contact the Security Department for further action.

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EXHIBIT 9A
ALCO Sensor III Operational Checklist
Sample

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TEST SUBJECT NAME: _____	DATE _____
SOCIAL SECURITY NO: _____	SERIAL NO: _____
TIME OF TEST: TEST 1 _____	TEST 2 _____
TEST RESULT (BAC): TEST 1 <u> 0 </u> %	TEST 2 <u> 0 </u> %
OPERATOR NAME: _____	SIGNATURE: _____

INSTRUCTIONS - check each box after completion of step.

NOTE

The fifteen minute observation period of the subject may be waived as long as a positive test result is not received. Should a positive test result be indicated, it shall be disregarded and the alcohol breath test started anew after at least a 15 minute observation period.

A weak battery is indicated by an "8.888" in the display window. Replace battery.

1. Check temperature window on back of unit (should read 20° to 36° C).
2. Have the individual mount mouth piece on unit.
3. Press "READ" button and hold for 10 seconds. Check to see if .000 is constant. If not, press "Set" button and recheck in one minute. If the display reads greater than .000, remove the instrument from service and forward to the Medical Department for repair and use another instrument for testing.
4. Press "SET" button.
5. Instruct subject to take a deep breath and blow steadily through the tube until told to stop (minimum of 4 seconds). (NO smoking within fifteen [15] minutes of test.)
6. Push "READ" button during third second that the subject is blowing. (Subject MUST continue to blow for a minimum of one [1] second after the "READ" button is depressed.)
7. Keep "READ" button depressed until reading stops climbing.
8. Record reading and time of TEST 1/TEST 2. (NOTE: The two readings must agree within ±10% of the averages of the two measurements, if not, use another instrument).
9. Press "SET" button to accelerate elimination of reading and electrically clean the cell surface.
10. Wait a minimum of two minutes and a maximum of 10 minutes and repeat Steps 3 through 9.

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Emergency Support Director Assistant Checklist

I. ACTIVATION

INITIAL

- a. Upon arrival at the EOF, ensure that steps are being taken to expeditiously activate the EOF.
 - Assist the ESD in the completion of Exhibit 1.
 - Assist the ESD in the completion of Exhibit 4.
- b. Report your status as activated when requested by the Emergency Preparedness Representative.

II. OPERATIONS

NOTE

The following steps are not presented in the exact sequence that they are to be performed. It is likely that some steps will have to be performed out of the sequence listed and that some steps will be performed concurrently. Steps that are not applicable for the present situation may be skipped. Other steps may need to be repeated. This exhibit should be referred to periodically to ensure that necessary actions are not missed.

- a. Refer to EPIP-TMI-.01, "Emergency Classification and Basis", whenever major plant changes have occurred to determine if a change in emergency classification is warranted.
- b. If the ESD has assumed the responsibilities for "Approving and directing official notifications to off site agencies; then perform the following:
 - Inform the EOF Communications Coordinator that the ESD has assumed responsibility for off site notifications.
 - Assist the ESD in filling out the Emergency Report Form - TMI.
- c. When the ESD leaves the main room of the EOF, assume the Person-In-Charge role until the ESD returns.

NOTE

This does NOT include assuming the responsibilities that the ESD has assumed from the ED.

- Interrupt ESD conferences to inform the ESD of major changes that occur in the plant.

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- d. Promptly process press releases received from the PI Rep - EOF for ESD review and approval.
- e. Assume the TMI, Point-Of-contact role for any inquiries from the following:
 - NEI (Technical and Regulatory Division)
 - EPRI
 - ANI
- f. Assist the ESD in the completion of Exhibit 5.
 - Insure each completed Exhibit 5 includes the Briefing Time.
- g. Forward the completed checklist and all logs to the Emergency Preparedness Representative at the end of the event.

Name _____ Time _____ Date _____
ESD Assistant

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Public Information Representative - EOF

I. ACTIVATION

- ___ a. Contact the Duty PI REP to advise of your arrival at the EOF and to determine whom will be writing Press Releases and whom will be the Media Briefer.
- ___ b. Start a log of all telephone calls in accordance with EPIP-TMI-.05.
- ___ c. Report your status as activated when asked by the Emergency Preparedness Representative.

II. OPERATION

NOTE

The following steps are not presented in the exact sequence that they are to be performed. It is likely that some steps will have to be performed out of the sequence listed and that some steps will be performed concurrently. Steps that are not applicable for the present situation may be skipped. Other steps may need to be repeated. This exhibit should be referred to periodically to ensure that necessary actions are not missed.

- ___ a. Gather information about the emergency and provide it to the Media Briefer and News Release Writer, as appropriate:
 - Be especially attentive to any radiological situation, whether or not a radiation release is occurring. ANY release of radiation in the context of the emergency SHOULD be reported to the Press Release Writer and Media Briefer.
 - Use the "Plant Emergency Information Checklist" (Refer to Exhibit 1C of the TMI Emergency Communications Response Manual) to obtain plant information.
 - Develop Bullets of information (e.g., RCP 'A' has been restarted) from attending ESD Conferences and obtained outside the conference.
 - i) Information not obtained directly from plant indications needs to have ESD Assistant review and ESD approval.
 - ii) ALL BULLETS must be reviewed and APPROVED by the ESD.
 - iii) Obtain ESD approval of bullets generated during an ESD conference before the ESD leaves the conference room.
 - iv) Fax the authorized information to the Media Briefer.

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- Continually update the Media Briefer and the Press Release Writer using the Emergency Information Checklist.
- Keep in contact with the PI REP – ECC who is to route new information to the JIC as requested.

NOTE

You are also required to provide real-time information about plant conditions, without ESD approval, to the JIC staff in order to assist the Media Briefer's understanding of changing plant conditions.

Press Releases

- _____ b. When DRAFT Press Releases are received review them for accuracy before submitting them to the ESD Assistant for processing and obtaining ESD APPROVAL. Refer to Exhibit 13, Press Release Guidance, to enhance your review.
- Depending on the change required either mark up the DRAFT and have the Press Release Writer make the corrections before the processing below:
 - i) Give it to the Group Leader R&EC for review and approval
 - * Be persistent to get it reviewed and INITIALED PROMPTLY
 - ii) Give it to the Tec Support Rep for review and approval
 - * Be persistent to get it reviewed and INITIALED PROMPTLY
 - iii) If required, have Security perform a review for SAFEGUARDS information
 - * Be persistent to get it reviewed and INITIALED PROMPTLY
 - iv) Give it to the ESD Assistant for submittal to the ESD for review and approval
 - * Be persistent to get it reviewed and SIGNED PROMPTLY
 - Press Releases announcing anything other than emergency level changes or Media advisories (e.g., JIC activated) must be approved by the Emergency Support Director.
 - Fax or deliver if the JIC is at the EOF the initialed (APPROVED) DRAFT Press Release to the Press Release Writer to obtain a final Press Release.
 - i) Call the Press Release Writer and provide the changes verbally to expedite the Press Release process.
 - Maintain copies of the Press Releases.
 - Provide a copy of ALL APPROVED Press Releases to the ESD.

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EXHIBIT 13
Press Release Guidance

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- 1.0 Press releases should be issued as soon as possible, typically within one hour from the time that a major plant event has occurred. Press releases shall be written in accordance with the following guidelines:
- a. The following categories of information should be included in press releases.
- Level of Emergency
This is simply identifying which of the four emergency levels was declared.
 - Basis for Emergency Declaration
This should be a simplified description of the plant condition which produced the emergency declaration (e.g., a leak of radioactive water within a plant building).
 - Operations Status of the Plant
A simple description of the plant status at the time of the emergency declaration (e.g., TMI was operating at 100% power, however, the plant is currently reducing power).
 - Company/Government Interface
This is intended to inform the public that TMI has notified and is working closely with government officials so that public confidence and company credibility can be increased, or maintained.
 - Corrective Actions
This should be a non-technical description of what plant personnel are doing to correct the problem. It may include such language as "attempts are being made to stop the leak" or "plant personnel are investigating the cause of the leak."
 - Off-site Impact
A statement which simply assess what impact this event may have on the environment. This is intended to provide factual information on off-site radiological conditions (e.g., a radioactive release is in progress, however, monitoring teams have not detected any radiation levels in excess of normal background).

The initial press release should include all or part of the above information, however, at the very least, it should contain information from the parts above.

- b. In addition, the following guidance should be used in issuing press releases:
- Speculation, Dose Projections and Protective Action Recommendations should not be included in press releases.

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- Press Releases SHALL have the concurrence of the Emergency Support Director. Press Releases, should have engineering, radiological and as appropriate Safeguards review.
 - a. Exceptions to this are limited to releases that are media advisories or releases that only contain 'boiler plate' information (e.g., level of emergency without any specific details or that the Joint Information Center is now activated).
 - i. The ED/ESD should be made aware of these advisories.
 - b. Original initialed copies are retained for records.
- Press releases should be reviewed promptly to support timely (< 1 hour) issuance.
- Press releases should avoid undefined technical terms and abbreviations (e.g., plant names, trip, etc.)
 - a. Press releases should be written to be as simple as possible.
 - i. Where possible, descriptions should be used instead of technical terms. For example, "back up power source" should be used in place of "diesel generators".
 - b. Additional list of Technical terms and alternate words.

<u>Technical Terms</u>	<u>Suggested Descriptions</u>
Accountability	The process of accounting for all plant personnel
Auxiliary Building	Building housing support equipment for the Reactor
RMG22 RMG23	A monitor which detects radiation levels inside the Reactor Building
Contaminated	Has loose radioactive material on it, him, her.
Contamination	Loose radioactive material
Containment Building	Building which houses the Reactor or Reactor Containment Building
Cladding	A metal tube containing the nuclear fuel
Control Rod	A device which when inserted in a reactor stops the generation of power
Critical	Sustained Chain Reaction

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<u>Technical Terms</u>	<u>Suggested Descriptions</u>
Diesel Generator	Emergency Power Unit or Back Up Power Source
Fission Products	Radioactive materials made from operating the Reactor
Fission Products Barriers	Barriers designed to contain the radioactive materials made from operating the Reactor.
Fuel Cladding Failure	Damage to the metal tubes containing the nuclear fuel.
Fuel Pool	Underwater Storage Area for Nuclear Fuel
Grid	Electrical Distribution System
Hot Well	Tank that collects condensed steam
Loss of Off Site Power	The plant has lost its connection to the Electrical Distribution system
Noble Gas	Radioactive Gas
Penetration	Opening through the wall
Plume	Radioactivity released in the air or water
Poison	A material which reduces power in the reactor
PORV	Pressure Relief Valve
Primary System	The system that circulates water through the Reactor to remove heat
Protected Area	Security Barrier around the plant
Radionuclides	Radioactive material
Reactor Building	Building which houses the reactor or reactor containment building
Reactor Building Purge	A means of exchanging air inside the Reactor Building with outside air
Reactor Trip	Automatic or Manual Shutdown of the Reactor

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<u>Technical Terms</u>	<u>Suggested Descriptions</u>
Reuter Stokes	Off Site electronic Radiation Monitors
SCRAM	Immediate or Fast Shutdown of the Reactor
Secondary System	Non Nuclear Steam System
Steam Generator	Heat Exchanger where steam is made
Subcritical	No self sustaining chain reaction
Half Life	Time it takes for half of the radioactive material to decay away

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EXHIBIT 14
Site Access Policy for Media During Emergencies

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NOTE

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- 1.0 Providing site access to media personnel during a plant emergency or in the recovery from a plant emergency is in the best interest of the company and the public. However, media access to the site must not impair the response to the emergency.
- 2.0 Responsibility for approving site access rests with the Emergency Support Director, or, if the EOF is not activated, with the Emergency Director. Refer to Section 5 of this exhibit for responsibilities.
- 3.0 For purposes of media access to the site during an emergency, the same industrial safety and security standards and requirements that apply to non-essential employees will be applied to the media.
- 4.0 **Communications Dept. Responsibilities**
 - a. Requests for media access will be made to the ESD or ED by the Public Information Duty Representative or the Communications Emergency Team Leader.
 - b. Communications will provide the ED/ESD with the number of media to gain site access, areas to be accessed and length of time the media will be there. (Communications will decide the number of media gaining access based on conditions at the time of the emergency. An attempt will be made to gain access for, at a minimum, one representative each from radio, television and print media.)
 - c. Communications will provide media transportation on and off site.
 - d. Communications will have each member of the media sign a Media Access Briefing Form, indicating they were briefed about the risks as they were known at the time by Company Management.
 - If media access does not involve entry into a posted radiologically controlled area:
 - a. The Communications staff will conduct the sign in and badging of media at TMI.
 - i. Communications will notify the Security Coordinator prior to proceeding with Site Access.
 - b. Communications will supervise and escort the media while on site.
 - c. Communications will conduct a briefing explaining the radiological and industrial conditions and risks on site.

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- If media access involves entry into a posted radiologically controlled area:
 - a. Media will be processed at the EOF, as appropriate, receiving dosimetry, training, bioassay, waivers and briefings based on established procedural requirements.
 - i. Communications will notify the Security Coordinator prior to proceeding with Site Access.
 - b. Communications in conjunction with Radiological Controls will supervise and escort the media while in posted radiologically controlled areas.

5.0 ED/ESD Responsibilities

- a. The ED/ESD will consult with the RAC/Group Leader R&EC, and media will be granted access if the projected dose will not exceed the 500 millirem annual limit including external and internal exposure.
 - For Security driven events, media access to the Site must also be approved by the Local Law Enforcement Agency/Security.
- b. Approve media access to the site if requirements are met.

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**EXHIBIT 15
Technical Support Rep Checklist**

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I. ACTIVATION

Initials

1.0 Activate the Tech Support Rep position.

- a. Start the Technical Support Representative Log in accordance with EPIP-TMI-.05, "Communications and Record Keeping".
- b. Assign a communicator to communicate on the Technical Functions Line with the communicator in the Technical Support Center (TSC).
 - Instruct the communicator to log telephone conversations in accordance with EPIP-TMI-.05, "Communications and Record Keeping".
- c. Verify that the CRT to the Plant Process computer is being activated in accordance with Exhibit 15A instructions.
- d. Verify that the projection information System is activated.
 - Use instructions posted at the projection unit.
- e. Report your status as activated when asked by the Emergency Preparedness Representative

II. Tech Support Rep Operations

NOTE

The following steps are not presented in the exact sequence that they are to be performed. It is likely that some steps will have to be performed out of the sequence listed and that some steps will be performed concurrently. Steps that are not applicable for the present situation may be skipped. Other steps may need to be repeated. This exhibit should be referred to periodically to ensure that necessary actions are not missed.

- a. Contact the TSC to determine the following:
 - Operational status of the plant
 - Mitigating activities
 - i. Completed
 - ii. Underway
 - iii. Planned
 - Release information
 - i. Pathway
 - ii. Duration

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EOF

Plant Process Computer Access Instructions

- _____ 1. To put computer on line, verify system is energized or energize by turning on the computer and monitor.
 - a. If the computer and monitor are energized but there is nothing displayed on the monitor, adjust the contrast knob as needed.

NOTE
This is for the dedicated line access.

- _____ 2. Simultaneously press the following keys ("Shift" and "On Line/Off").
 - a. This may not work on the first attempt - try again.
 - b. If the system does not come on line, access the PPC using the modem instructions in Step 9.
- _____ 3. If PPC access is granted, the words "Off Line" at the bottom right hand corner of the screen will disappear.
- _____ 4. Press the key marked "GROUP" or any other function key to access the PPC.
- _____ 5. Enter the number of the area you wish to access, and press "Execute".
- _____ 6. From any menu screen, select the display number to be printed and then press the print button (other functions are per users guide).
- _____ 7. To automatically print the first 10 displays in the EOF area, push the EOF print button.
- _____ 8. To quit,
 - 8.1 Clear the screen, press "cancel" twice.
 - 8.2 Simultaneously press the following keys ("Shift" and "On Line/Off Line").
 - 8.3 Reduce contrast to eliminate monitor display.

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Modem Access (Backup)

9. If the direct access fails, proceed as follows:

_____ 9.1 Press the "C" (cell) button.

_____ 9.2 Press the "Go" button.

NOTE

The modem will automatically dial the following two numbers:
9-717-948-9114
9-717-948-9115

_____ 9.3 When the numbers are dialed and connected, proceed with Step 4.

10. If PPC access is not successful or problems are encountered with the computer, call 9-717-948-8606 for assistance.

11. To quit, proceed as follows:

11.1 On Aydin Keyboard press CANCEL twice.

11.2 On Aydin Keyboard press and hold down the SHIFT key (either RIGHT or LEFT) and press the On/Off Line key or xmit page key.

NOTE

An OFFLINE message may briefly appear in the lower right hand corner.

11.3 On modem press the following buttons.

11.3.1 "DISC"

11.3.2 "GO", the modem will display "DISCONNECTED".

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TMI/NRC Emergency Response Interface Criteria

This is a synopsis of the NRC emergency response process as it applies to TMI.

Upon arrival of the NRC, the ED/ESD should:

- Verify who is the senior NRC person in charge
- Ask the senior NRC person to inform the ED/ESD when the position of Director Site Operations is assumed and whether the responsibility to issue directives is included.
- Request that the NRC keep TMI Management informed of all substantive information exchanges between the NRC and the state.
- Request the NRC provide all DIRECTIVES in writing.

In essence, directives from the NRC must come from the NRC Director (typically, the NRC Chairman) or from the NRC Director of Site Operations (typically, the NRC Regional Administrator). Such advice or directive can only be communicated to the Emergency Director (the Emergency Support Director once the EOF is activated). If a directive order is issued by the NRC Director or Director of Site Operations, the ED/ESD should request written confirmation which spells out the specific nature of the directive.

While NRC advice may be challenged by the ED or ESD, directives must be complied with.

With respect to protective action recommendations for the public, the NRC may either endorse the TMI's recommendation or opt to recommend a different one. The ED/ESD is encouraged to include the NRC and State representatives in the protective action recommendation discussions in order to arrive at a mutually agreeable recommendation. In the event that the NRC opts to recommend a different PAR, they will attempt to resolve their differences with the utility prior to recommendations to the State. Their recommendation, like the utility recommendation, will be considered by the State in the development of a Governor directive.

SYNOPSIS - NRC EMERGENCY RESPONSE

Revision 2 to NUREG 0728, supplemented by NUREG-0845 and NUREG-1471, describes the manner in which the NRC will respond to an incident and provides criteria for making preplanned response decisions. They provide procedural guidance, describe the functions related to NRC emergency response and define procedures for responding to the following NRC modes of operation.

1. Normal Mode
2. Standby mode
3. Initial Activation
4. Expanded Activation
5. Deactivation

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Each mode defines the scope of NRC activities related to a particular level of emergency response in ascending order of degree of involvement to deactivation. The various modes are characterized as follows:

1. Normal mode - Normal activities designed to maintain readiness.
2. Standby mode - Regional Office activates the Incident Response Center (IRC) with an appropriate staff and NRC Headquarters Operations Center is staffed by a Standby Team.
3. Initial Activation - NRC Operations Center is staffed by a response team, the Regional IRC is fully activated and a Site Team is dispatched under the leadership of the Regional Administrator, normally designated as Director of Site Operations (DSO).
4. Expanded Activation - Focus of NRC response operations is shifted to the site. DSO is designated primary spokesman for the NRC and may be empowered with directive authority by the Chairman of the Nuclear Regulatory Commission.
5. Deactivation - Follow-up activities (e.g., reviews, investigation and recovery operations).

The particular mode assumed by the NRC will be dependent upon Licensee event classification and "independent NRC perception of relative severity of uncertainty of accident conditions".

NRC functions defined in NUREG 0728 which impact directly on the Licensee are:

1. Evaluate Incident and Plant Status

 NRC personnel at the site, the Regional Office and the Headquarters will acquire the necessary data to develop and maintain a complete and accurate overview of the evolution and status of the event. This will involve data gathering via ERDS, ENS, HPN, and other FTS 2000 telephones as well as direct communications with the Licensee at the ERF's.
2. Evaluate Licensee Actions

 NRC personnel will evaluate Licensee actions to mitigate the consequences of the incident and provide recommendations concerning protective actions for the public.
3. Project Incident Consequences and Plant Status

 Based on information and evaluations discussed above, the NRC will develop an independent projection of the likely further course of events.

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4. Advise, Assist or Direct Licensee

The NRC may offer advice or assistance to the Licensee during an emergency, or may respond to Licensee requests for advice of assistance. This may involve diagnosis of critical problems, development of proposed remedial courses of action, and proposals to implement additional precautionary measures. The NRC is also prepared to direct that certain actions be taken if, after thorough discussion with the Emergency Director (the Emergency Support Director once the EOF is activated) it is decided that such direction is required. In the event that such action is taken by the NRC Director or the NRC Director of Site Operations, the ED/ESD should request written confirmation which spells out the specific nature of the directive. Directives will be communicated directly to the ED/ESD from the NRC Director (NRC Chairman) or from the NRC Director of Site Operations (DSO), typically the Regional Administrator, once appointed and empowered to do so.

Several important concepts govern the NRC in providing advice, assistance, or direction. They are:

- a. The Licensee is at all times responsible for mitigating the consequences of the incident.
- b. Although the NRC could issue formal orders to the Licensee to take certain measures and to monitor implementation, ". . . licensee continues to make other key operational decisions and to operate and manage the facility . . .".
- c. The NRC must have a single voice when advising or directing the Licensee.
- d. The ED/ESD has the option to accept or challenge NRC advice.

At no time will advice or direction come from both the Director and the DSO and the Licensee will always be kept apprised of who is empowered to exercise authority as the NRC spokesman. All other NRC personnel in contact with Licensee personnel are responsible to make clear that discussions should not be construed as advice or direction but rather as a sharing or gathering of information.

5. Inform Public and Monitor Public Information

During emergency situations, the NRC will formulate its own press releases based on information gathered from the Licensee and from NRC personnel. Procedures exist to ensure that press releases are approved by one person. That person may be the Regional Administrator, NRC Chairman, or DSO depending on the current NRC mode of operations. NRC draft press releases will normally be shared with the Licensee; however, this does not imply a request for approval by the Licensee. The intent is to identify issues needing clarification prior to release to avoid confusing or misleading the public.

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6. Recommend Protective Actions for the Public

The NRC responsibility during an emergency, as during normal operations, is to ensure that protection of public health and safety is adequate. One aspect of this responsibility is to provide protective action recommendations or advice to offsite authorities. This may take the form of an NRC endorsement of a Licensee protective action recommendation or the NRC may opt to recommend additional protective actions. The NRC is not normally involved in the process of recommending protective actions, however they may get involved if a major problem is identified with the protective actions recommended by the licensee or protective actions undertaken by the state or local government. Additionally NRC involvement may be requested by state or local officials.

7. Review, Investigate and Document Response Actions

The scope of this task is not preplanned by the NRC; however, it is apparent that this may require a great deal of interaction between the Licensee and the NRC after-the-fact.

SYNOPSIS - REGION I SUPPLEMENT

The Region I Incident Response Supplement to NUREG 0845 restates many of the concepts of NUREG 0845 in greater detail as they apply specifically to Region I.

Section I - Concept of Operations delineates general duties and responsibilities and describes the NRC modes of operation. Relative to the authority of the DSO, it states:

"The Director of Site Operations (DSO) supervises/manages all NRC personnel and operations at the site, is the NRC spokesperson, represents the NRC in interactions with other agencies and carries out the authority delegated by the Director of the NRC Executive Team (Chairman).

Delegated authority will include one or more of the following:

(a) authority to recommend actions to the Licensee, (b) authority to direct the Licensee to take specified actions, and (c) authority to recommend actions offsite, including protective measures for the public.

The Chairman of the NRC, by memo dated 4/22/80, indicated the Chairman may delegate authority to the Regional Administrator as DSO, upon transfer of control of NRC actions and resources to the site, to issue orders to a Licensee during an emergency. It is intended that this authority be used as a last resort to mitigate the emergency conditions only if, in the judgement of the NRC, the Licensee has shown it is incapable of controlling the emergency. This authority is valid only in an emergency when the Regional Administrator (or other senior NRC official) is the DSO and specific authorities have been transferred to him by the Chairman or designated alternate".

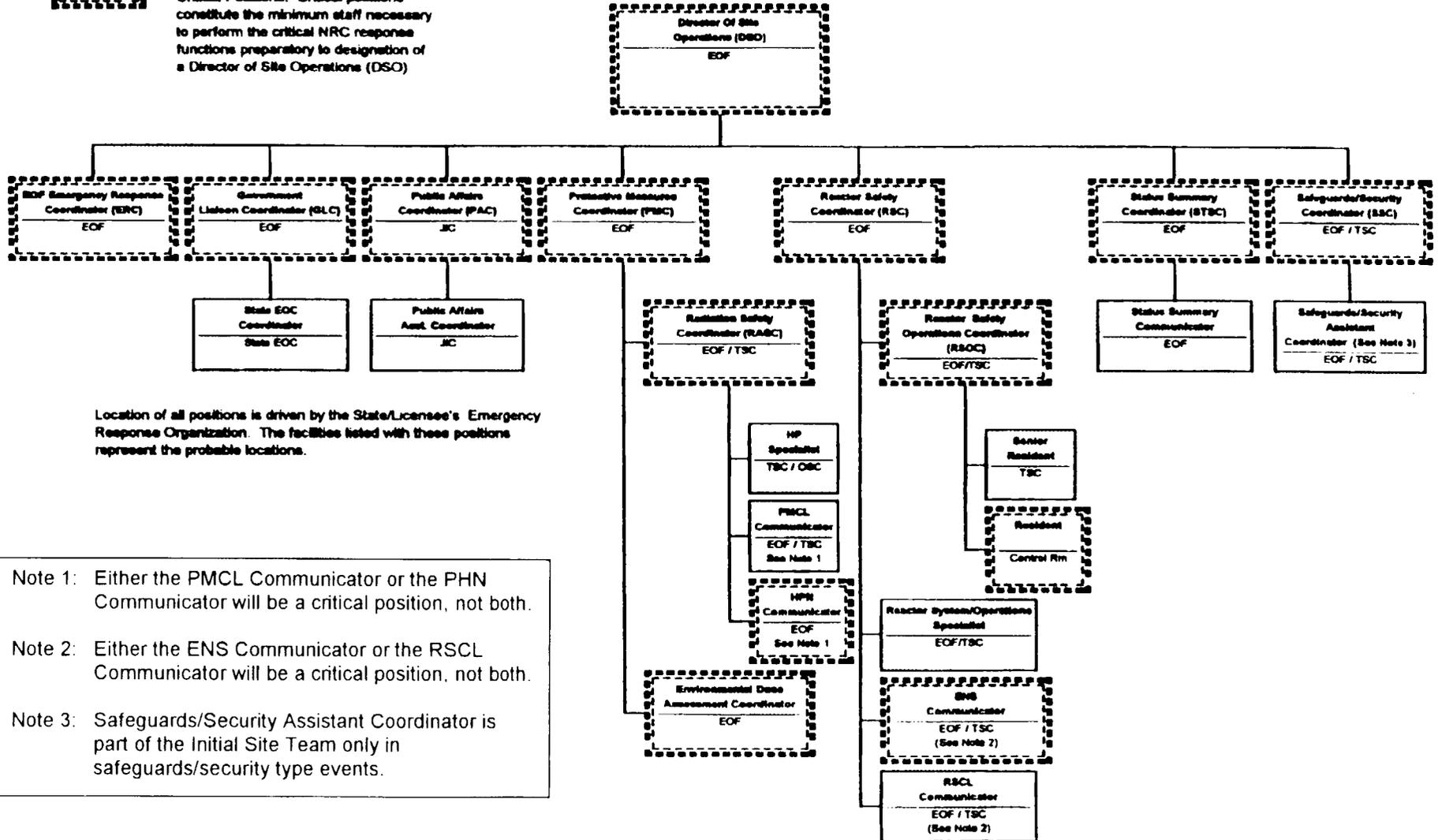
Sections II and III contain detailed procedures specific to Region I and present no new concepts of interest to the Licensee.

The attachment to the synopsis is provided for your information. This attachment depicts the Site Team Organization and is an extract of the NUREG-1471. It defines the number of NRC personnel expected to operate in each facility and shows the lines of communications the NRC expects to use.

EXHIBIT 16



Dashed bordered boxes indicate Critical Positions. Critical positions constitute the minimum staff necessary to perform the critical NRC response functions preparatory to designation of a Director of Site Operations (DSO)



Location of all positions is driven by the State/Licensee's Emergency Response Organization. The facilities listed with these positions represent the probable locations.

Note 1: Either the PMCL Communicator or the PHN Communicator will be a critical position, not both.

Note 2: Either the ENS Communicator or the RSCL Communicator will be a critical position, not both.

Note 3: Safeguards/Security Assistant Coordinator is part of the Initial Site Team only in safeguards/security type events.

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**EXHIBIT 17
Group Leader - Radiological and Environmental Controls Checklist**

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I. ACTUATION

Initials

1.0 Activate the Group Leader – Radiological and Environmental Controls position.

- _____ a. Start the Group Leader R & EC log in accordance with EPIP-TMI-.05, Communications and Record Keeping.
- _____ b. Turn on the Group Leader R & EC computer to access the Emergency Information Network (e.g., RAC information, or dose projections).
- _____ c. Contact the RAC to obtain a status of the situation.

Use list below as a guide, it is not all-inclusive.

- Release path(s)
- Release duration
- In plant radiological conditions
- Field team status
- Samples requested

- _____ d. Contact the Environmental Assessment Coordinator (EAC) to obtain a status of the situation.

Use list below as a guide, it is not all-inclusive.

- Field team status
- Weather forecast
- Reuter Stokes

- _____ e. Inform the Emergency Preparedness Representative that the Group Leader R & EC position is activated.

II. OPERATION

2.0 Perform the following:

NOTE

The following steps are not presented in the exact sequence that they are to be performed. It is likely that some steps will have to be performed out of the sequence listed and that some steps will be performed concurrently. Steps that are not applicable for the present situation may be skipped. Other steps may need to be repeated. This exhibit should be referred to periodically to ensure that necessary actions are not missed.

- a. Review dose projection information

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- b. Review field monitoring information
- c. Perform dose assessment
 - Compare dose projections against field monitoring data.
 - Determine if the dose projections are accurate (i.e., Field monitoring team data within a factor of 10 and less than the dose projection).
 - Compare dose projections and field monitoring team data to EPA PAG's.
 - Review weather forecast data for impact on the dose assessment process.
- d. Keep the ESD informed on the following:
 - All radiological issues.
 - All environmental issues.
 - All industrial health issues.
 - All safety issues.
- e. IMMEDIATELY inform the ESD if, after thorough dose assessment, you conclude that EPA Protective Action Guidelines (PAG's) will be exceeded anywhere offsite including OUTSIDE the 10 mile EPZ.
- f. Report any telephone problems to the EOF Communications Coordinator.
- g. Direct Access Control personnel to set up the EOF frisking station.
 - If appropriate, require personnel to frisk prior to entering the EOF.
 - If personnel require decontamination, refer to procedure 6610-ADM-4330.02, Personnel Contamination Monitoring and Decontamination.
- h. Review DRAFT press releases developed for ESD approval to insure accuracy in the radiological information.
 - Use Exhibit 13 for guidance to ensure the releases do not contain the following:
 - a. Technical jargon
 - b. Acronyms
 - c. Dose Projections
 - d. Protective Action Recommendations
 - Correct the press release, as required.
 - Endorse the correct release for ESD approval by initialing.

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- i. Periodically brief the following on current radiological and environmental conditions.
 - ESD
 - NRC
 - State representative (BRP)
 - a. Notify the State (BRP representative) if valid offsite dose projections are ≥ 25 REM thyroid dose.
 - b. Inform the State (BRP representative) of any problems with the automated dose projection code.
 - Insure the level of conservatism in the calculation is presented.
- j. Consider the following if, the Training Center is used as the Near-Site JIC and / or the Remote Assembly Area (RAA)
 - Evacuation of these facilities should NOT occur prior to evacuation of the general public.
 - Evacuation orders, for the general public, do NOT automatically apply to the RAA.
 - Relocation of the RAA should be considered if, the projected dose at the facility reaches 4 REM (TEDE) or 40 REM (CDE).
 - If relocated, the RAA and the JIC should be re-established at the EOF.
 - If warranted, provide radiological protection instructions to the RAA Team Leaders.
- k. As necessary, assist the Access Center Coordinator in the completion of the TMI Access Authorization Checklist for NRC personnel requiring access to the site.
 - If additional dosimetry issue support is needed, request the Group Leader – Admin Support call out a Radiological Support Technician.
- l. Forward the following to the Emergency Preparedness Representative
 - Completed Group Leader R & EC checklist
 - Completed Group Leader R & EC log

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2.1 Attend ESD conferences.

a. Discuss dose assessment information

- Dose projections
 - i. Insure the level of conservatism in the calculation is presented.
- Field monitoring team results
- Sample results

b. Provide information concerning Protective Action Recommendations (PAR)

- Appropriate PAR in accordance with Exhibit 8
- When EPA PAG's are exceeded outside 5 mile radius
- When the EPA PAG's are exceeded outside 10 mile EPZ
 - i. Dose projections covering the 10 to 30 mile radius can be found on the Emergency Information Network.
 - ii. Recommend protective actions outside the 10 mile EPZ as follows:
 - a. Expand the evacuation area in 5 mile increments
 - b. Utilize a 360 degree approach
 - c. Expand the area such that EPA PAG's are not expected to be exceeded outside the recommended radius (e.g., If PAG's are expected to be reached at 17 mile radius, the PAR would include the 20 mile radius).

c. Inform the NRC representative of any problems with the automated dose projection code.

- Insure the level of conservatism in the calculation is presented.

Name _____ Time: _____ Date _____
Group Leader - Radiological & Environmental Controls

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Environmental Assessment Coordinator Checklist

1.0 Activate the Environmental Assessment Coordinator Position.

- _____ a. Start an EAC log in accordance with EPIP-TMI-.05, "Communications and Record Keeping.
- _____ b. Ensure that the Met/Dose Coordinator position is activated.
- _____ c. Ensure the Emergency Information Network (EIN) Computer is activated.
- _____ d. Establish communications with the RAC.
- _____ e. Report the EAC and Met/Dose Coordinator positions as activated when asked by the Emergency Preparedness Representative.

2.0 Operations

NOTE

The following steps are not presented in the exact sequence that they are to be performed. It is likely that some steps will have to be performed out of the sequence listed and that some steps will be performed concurrently. Steps that are not applicable for the present situation may be skipped. Other steps may need to be repeated. This exhibit should be referred to periodically to ensure that necessary actions are not missed.

a. Deploy Field Monitoring Teams

- _____ • Make team assignments.
- _____ • If EOF access control has been established, inform the access center coordinator that there will be more than one access area open while field monitoring teams are being dispatched.
- _____ • Instruct the field monitoring teams to ensure that there is no unauthorized entry.
 - _____ i. Instruct the teams to secure the door upon their departure.
 - _____ ii. Instruct them to inform the EAC upon departure.
- _____ • Instruct the team to perform field monitoring per EPIP-TMI-.10. "Onsite/Offsite Radiological/Environmental Monitoring."

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b. Keep the RAC and the Group Leader R & EC informed on the status of the following:

- Field Team measurements
- Reuter Stokes readings
- Meteorological data
- Plume Travel

NOTE

The items listed under "b" above are met if EIN is active and displaying proper data.

- Weather forecasts
- Environmental Monitoring sample results (if available)
- Other pertinent information

c. Direct the Field Monitoring Efforts.

- When the EAC and MET/Dose Coordinator positions are activated and the field monitoring teams are operational, inform the RAC that the EACC is ready to assume responsibility for off-site radiological and environmental monitoring.

NOTE

The RAC will maintain responsibilities for on-site monitoring and in-plant radiological controls.

- i. Request the RAC inform the ED assistant that the EACC is operational.
- ii. Provide the following message to Field Monitoring Teams.

ATTENTION FIELD MONITORING PERSONNEL. THE ENVIRONMENTAL ASSESSMENT COMMAND CENTER IS ACTIVATED AND WILL ASSUME RESPONSIBILITY FOR ALL OFF-SITE RADIOLOGICAL AND ENVIRONMENTAL MONITORING AS OF _____ (Time). ALL TEAMS RESPOND BY CONFIRMING THIS MESSAGE.

- Use MIDAS plume plots and meteorological data to properly position the teams for monitoring duties while keeping their doses ALARA.
 - i. Provide redundant Tracking of field team accumulated doses, after field teams reports accumulate 500 mRem of thyroid dose.

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- Direct the Field Teams to perform monitoring activities such as but not limited to:
 - i. Scan to find plume center line
 - ii. Perform dose rate surveys
 - iii. Obtain air samples
- d. Interpret field team data.
 - Ensure field team data is entered in the EIN (Onsite/Offsite Teams).
 - Compare field team data to that projected by MIDAS and the RAC dose codes.
 - Report results of comparison to the Group Leader R & EC and, as appropriate, to the RAC.
- e. Evaluate Reuter Stokes information.
 - Compare Reuter Stoke information to field team data.
 - Report results of comparison to the Group Leader R & EC and, as appropriate, to the RAC.
- f. Ensure weather forecast information is provided to RAC and the Group Leader R & EC.

NOTE
Be especially sensitive to changes in dispersion at dusk and dawn.

- g. If problems are encountered with the telephones, contact the EOF Communications Coordinator.
- h. As additional personnel are available assign them to the following positions, as needed to help fulfill EAC responsibilities.
 - Off-site Field Team Coordinator
 - Dose Projection Computer Operator
 - Radio Communicator
 - RAC Communicator
- i. Forward the completed checklist and all other pertinent documentation to the Emergency Preparedness Representative at the end of the event.

Name _____ Time: _____ Date _____
 Environmental Assessment Coordinator

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Met/Dose Coordinator

1.0 Activate the Met/Dose Coordinator position.

- ___ a. Energize the following, if not already done.
 - EACC Computers
 - EACC Printers
 - EACC radio
- ___ i. Perform radio check.
- ___ b. Access the Emergency Information Network (EIN).
 - If the LAN connection is unavailable the EIN data will not be available and functions of the Reuter/Stokes, Midas, and the meteorology will have to be obtained by alternate means.
- ___ c. Obtain a set of present meteorological parameters from the 1A screen on the EIN or some other suitable means.
- ___ d. Report to the EAC that the Met/Dose Coordinator position is activated.

2.0 Operations

NOTE

The following steps are not presented in the exact sequence that they are to be performed. It is likely that some steps will have to be performed out of the sequence listed and that some steps will be performed concurrently. Steps that are not applicable for the present situation may be skipped. Other steps may need to be repeated. This exhibit should be referred to periodically to ensure that necessary actions are not missed.

- ___ a. Obtain a current weather forecast by any of the following means:
 - From a meteorologist, if available
 - i. Obtain a weather forecast if the meteorologist can provide one over the telephone.
 - ii. Ask the meteorologist to report to the EACC.
 - From National Weather Service information found on the LAN or the Internet.
 - From the National Weather Service directly using the telephone numbers found in EPIP-TMI-.06.

EXHIBIT 18B

Field Team Data Collection

Field Team Designation _____

Date of Sample _____

Sample Location	Time	Open Window E520 (mR/hr)	Closed window E520 (mR/hr) or Frisker (CPM)				
			Reading 1	Reading 2	Reading 3	Average	
						Air Sampler	
	Time	Sample type	Gross CPM	BKG CPM	Net CPM	Run Time	Flow Rate
		Iodine					
		Particulate					
		Noble Gas					
		Smear					

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Group Leader Admin Support

I. ACTIVATION

Initial

1.0 Activate the Group Leader Admin Support Function

- a. Begin the Group Leader - Administrative Support Log in accordance with EPIP-TMI-.05, "Communications and Record Keeping".
- _____ b. Report your status as activated to the Emergency Preparedness Representative.

II. GROUP LEADER - ADMIN SUPPORT OPERATIONAL CHECKLIST

NOTE

The following steps are not presented in the exact sequence that they are to be performed. It is likely that some steps will have to be performed out of the sequence listed and that some steps will be performed concurrently. Steps that are not applicable for the present situation may be skipped. Other steps may need to be repeated. This exhibit should be referred to periodically to ensure that necessary actions are not missed.

2.0 Implement EOF Access Control in accordance with Exhibit 6.

- a. If an individual is not available to implement Exhibit 6, proceed as follows:
 - Insure the door is locked.
 - Display a sign stating "Ring doorbell for facility access".

2.1 Determine, as necessary, where the following services can be performed or obtained.

- a. **General Administration**
 - Word processing
 - Typing pool
 - Reproduction
- b. **Transportation**
 - Helicopter services
(Refer to EPIP-TMI-.06)
 - Vans
 - Buses
 - Automobiles
 - Shuttle service

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- c. Personnel Administration and Accommodations
 - Personnel processing
 - i) Registration
 - ii) Indoctrination
 - iii) Training
 - iv) Security badging
 - Lodging
 - Food

- d. Outside Plant Support
 - Trailer setup
 - Janitorial Service
 - Telephones

- e. If problems are encountered with the telephones, contact the EOF Communications Coordinator.

- f. Process personnel requiring site access by implementing Exhibit 7, "TMI Access Authorization".
 - Ensure a Radiological Support Technician is called out to activate the dosimetry issue function at the EOF.

- g. Assume the duties as the TMI Point of Contact for INPO.

- h. Using Exhibit 21, develop a watch-bill for the Emergency Support Organization that will support the emergency on a 24 hour / day basis.
 - Determine from the ESD when he wants the first shift change to occur.
 - i. The time should be far enough in the future to give backup duty roster members time enough to get some rest before filling the second shift.
 - Use a 12 hour shift rotation.
 - Determine from each watch station the person that is presently filling that duty roster position.
 - i. List the person in the first shift position on Exhibit 21.
 - Determine alternate duty roster members.
 - i. Identify backup duty roster members already at the EOF.

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**EXHIBIT 21
Emergency Shift Schedule**

DATE: _____

GROUP: _____

Shift 1 Start _____ hours End _____ hours
 Shift 2 Start _____ hours End _____ hours

List duty roster positions for your group including phone talkers/communicators being used.

Position # -	Name -	Name -
Home Phone Number		
Work Phone Number		
Beeper Number		
Position # -	Name -	Name -
Home Phone Number		
Work Phone Number		
Beeper Number		
Position # -	Name -	Name -
Home Phone Number		
Work Phone Number		
Beeper Number		
Position # -	Name -	Name -
Home Phone Number		
Work Phone Number		
Beeper Number		
Position # -	Name -	Name -
Home Phone Number		
Work Phone Number		
Beeper Number		
Position # -	Name -	Name -
Home Phone Number		
Work Phone Number		
Beeper Number		
Position # -	Name -	Name -
Home Phone Number		
Work Phone Number		
Beeper Number		

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EOF Set Up for Personnel Monitoring and Decon

NOTE

These steps may be performed concurrently.

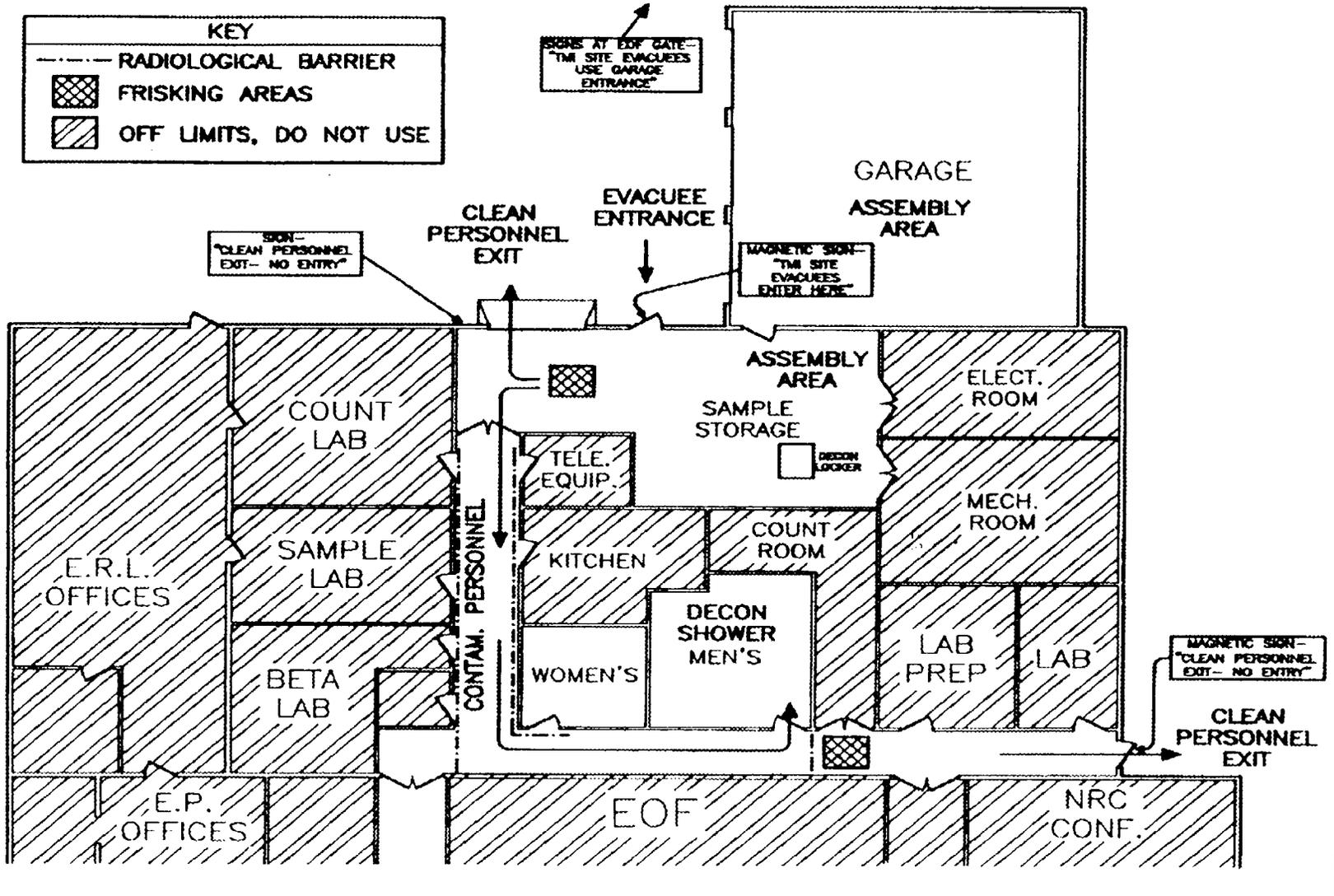
- 1.0 Obtain the signs from the decon locker and post them as follows (see Exhibit 9 of EPIP-TMI-.36):
 - Post a magnetic "TMI Site Evacuees Enter Here" sign on the outside of the door to the sample storage area.
 - Post a "Clean Personnel Exit - No Entry" sign outside the small roll-up door to the sample storage area.
 - Post 2 "TMI Site Evacuees Use Garage Entrance" signs on orange safety cones and place them at the EOF gate.
 - Post a magnetic "Clean Personnel Exit - No Entry" sign outside the door at the front of the EOF near the NRC Conference Room.

- 2.0 Set up a frisking area in the sample storage areas as indicated on Exhibit 9 of EPIP-TMI-.36.

- 3.0 Erect radiological barriers as shown on Exhibit 9 of EPIP-TMI-.36.

- 4.0 Take the following personnel decon supplies from the decon locker to the men's room.
 - Paper towels
 - Waterless hand cleaner
 - Wash basin
 - Bath soap
 - Shampoo
 - Scrub Brushes
 - Nail Clippers
 - Barber scissors
 - Nasal swabs
 - Disposable PC's
 - Masking tape
 - Poly bags
 - Frisker
 - Step off pad
 - Procedure 6610-ADM-4330.02

EXHIBIT 22



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**EXHIBIT 23
EOF Communications Coordinator**

Page 1 of 2

I. ACTIVATION

1.0 Activate the EOF Communications Coordinator position.

- a. Synchronize the EOF clock, Admin Room clock and the ESD conference room clock with the Control Room clock.
 - Dial 8070 (2070 for drills) and ask the ED Assistant for the Control Room clock time.
- b. Activate the Rayland Public Address System
 - Depress the black power button.
 - Ensure the red power indicator light is solid red.
 - Test the PA system by depressing the red signal button located on the ≈ microphone. An alert tone should be heard. (Note: If the red power light or PA test does not work, verify the unit is plugged in.)
- c. Report your status as activated when asked by the Emergency Preparedness Representative.

II. EOF Communications Coordinator Operational Checklist.

NOTE

The following steps are not presented in the exact sequence that they are to be performed. It is likely that some steps will have to be performed out of the sequence listed and that some steps will be performed concurrently. Steps that are not applicable for the present situation may be skipped. Other steps may need to be repeated. This exhibit should be referred to periodically to ensure that necessary actions are not missed.

2.0 Maintain an EOF Status Board with the following information, as a minimum, using the overhead projector in the front of the room.

- Time when EOF is activated
 - Emergency Classification Level
 - Major changes in plant status
- a. Call in additional personnel if requested to do so by the Emergency Preparedness Representative.
- Obtain the positions that need to be filled from the Emergency Preparedness Representative.
 - Use the Emergency Support Organization Duty Roster and telephone listings from the notebook at the communications table.

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EXHIBIT 23

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- b. If the ESD informs you that he has assumed the responsibility for "approving and directing official notifications to off-site agencies", perform the following:
 - Contact the ECC Communications Coordinator in the Shift Manager's Office (ECC) to receive a turnover.
 - i. Use EPIP-TMI-.06, Additional Assistance and Notification to obtain phone numbers.
 - Make notifications to offsite agencies in accordance with Exhibit 24, Offsite Notifications, using the message designated and approved by the ESD.
 - c. Coordinate the procurement of outside resources (e.g., Technical assistance, manpower, equipment, etc.) with the Group Leader Admin Support.
 - If requested to procure an outside resource, contact the Group Leader Admin Support for assistance.
 - d. If problems are encountered with the Emergency Telephones
 - Contact the ECC Communications Coordinator in the Shift Manager's Office (ECC).
 - i. Use EPIP-TMI-.06, Additional Assistance and Notification, to obtain phone numbers.
 - Provide the name of the telephone circuit and a brief description of the problem.
- 2.1 Forward the completed checklist and any other documentation to the Emergency Preparedness Representative at the end of the event.

Name _____ Time: _____ Date _____
 EOF Communications Coordinator

EXHIBIT 24
Off Site Notification Checklist

Initial in the box following the action for the level of emergency declared, unless a check is requested.

ACTION	UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY	CLOSE OUT EMERGENCY
Obtain an Emergency Report Form , Part 1 and 2, from the Emergency Support Director					
Perform 15 minute notifications					
Confirm Dial tone on Notification line					
Dial "91"					
As the agencies answer, state, " This is Three Mile Island Nuclear Station. Stand by for an emergency message. "					
Ask if each agency is on the line. [PEMA, are you on the line? Dauphin County?, etc.] Check when on line	PEMA Dauphin Cumberland Lancaster Lebanon York	PEMA Dauphin Cumberland Lancaster Lebanon York	PEMA Dauphin Cumberland Lancaster Lebanon York	PEMA Dauphin Cumberland Lancaster Lebanon York	PEMA Dauphin Cumberland Lancaster Lebanon York
Cancel the ring tone by flashing the hook switch twice.					
If one or more agencies do not answer promptly, get another person, such as the EP Representative, to perform a parallel notification using any telephone with an out side connection.					
Direct this person to log the Name/Dispatcher Number of the person contacted and the Time the notification was completed.					
State, " Please stay on the line after the following message to provide a name or dispatcher number and to confirm receipt. "					
Read Emergency Report Form , Part 1					
RECORD TIME Notification completed					

EXHIBIT 24

ACTION	UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY	CLOSE OUT EMERGENCY
Request receipt confirmation. (NAME or DISPATCHER number) PEMA Dauphin Cumberland Lancaster Lebanon York	_____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____
Flash the hook switch until a dial tone is heard <u>before</u> hanging up.					
If <u>not</u> already notified in parallel by another person, Notify remaining agencies that did not receive the information by pre-set conference call.					
Log receipt confirmation by recording name/dispatcher number and time. PEMA Time Dauphin Time Cumberland Time Lancaster Time Lebanon Time York Time	_____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____

FOR INFORMATION ONLY

AmerGen

TMI Emergency Plan
Implementing Procedure

Number

EPIP-TMI-.28

Title

Activation of the Technical Support Center

Revision No

12

Applicability/Scope

USAGE LEVEL

Effective Date

TMI Division

1

OCT 20 2000

This document is within QA plan scope
Safety Reviews Required

<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
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	Signature	Date
Originator	S. L. Cvijic <i>S. L. Cvijic</i>	10/2/2000
Procedure Owner	/s/ J. L. Whitehead for N. Brown	09/05/00
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Approver	/s/ N. Brown	09/20/00

	TMI Emergency Plan Implementing Procedure	Number EPIP-TMI-.28
Title Activation of the Technical Support Center	Revision No. 12	

1.0 **PURPOSE**

The purpose of this Procedure is to provide guidelines for the Technical Support Center (TSC) personnel to activate the TSC (Elev. 355', Control Tower) and/or backup TSC (Elev. 322', Control Tower).

2.0 **APPLICABILITY/SCOPE**

a. This procedure is to be initiated upon declaration of any of the following:

- Alert
- Site Area Emergency
- General Emergency
- As directed by the Emergency Director
- As needed by Engineering

3.0 **DEFINITIONS**

None

4.0 **RESPONSIBILITIES**

The Technical Support Center Coordinator is responsible for activating the TSC.

5.0 **PROCEDURE**

NOTE

The following steps are provided in an order likely to result in the most efficient response. However, due to the dynamic and unpredictable nature of emergencies associated with a nuclear power facility, the order of performing the steps may be modified to cope with existing conditions. Modifying the specific order of performance of these steps will have no adverse consequences.

- a. The Technical Support Center Coordinator shall ensure all applicable steps of Exhibit 1 are completed.
- Based on observations of plant data, make recommendations to the ECC that will aid in plant control and minimize any releases of radioactive material.
 - a) Use "TSC Engineering Calculations Guide" as needed to assist in developing recommendations.
 - Provide information/assistance to emergency repair teams as requested by the OSC.
- b. The Engineering Line Communicator shall ensure all applicable steps of Exhibit 2 are completed.

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- c. The Technical Support Center Data Collection and Analysis personnel shall ensure the applicable steps of Exhibit 3 are completed.
- d. At the completion of the event (or other use of the TSC), the TSC Coordinator shall notify the Manager, System Engineering or designee to perform an inventory in accordance with TEP-ADM-1300.01 by the end of the working day following the end of the event.

6.0 **REFERENCES**

- a. EPIP-TMI-.05, Communications and Record Keeping
- b. TSC Engineering Calculations Guide

7.0 **EXHIBITS**

- 1. Exhibit 1, Technical Support Center Coordinator's Checklist
- 2. Exhibit 2, Engineering Line Communicator Checklist
- 3. Exhibit 3, Technical Support Center Data Collection and Analysis Checklist
- 4. Exhibit 4, Back-up TSC Activation Instructions
- 5. Exhibit 5, ERF Terminal User Troubleshooting Instructions

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EXHIBIT 1

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NOTE

Steps not currently applicable or not required should be left blank in case those steps become applicable as the emergency evolves.

NOTE

The following steps are provided in an order likely to result in the most efficient response. However, due to the dynamic and unpredictable nature of emergencies associated with a nuclear power facility, the order of performing the steps may be modified to cope with existing conditions. Modifying the specific order of performance of these steps will have no adverse consequences.

Technical Support Center Coordinator's Checklist

- a. **WHEN** the minimum staffing is present, record names as follows:
- | | | |
|-----------------|--|---|
| Engineer 1 | | Inform the Emergency Director Assistant that the TSC is operational, using the Operations Line, or equivalent |
| Engineer 2 | | |
| Engineer 3 | | |
| Engineer 4 | | |
| TSC Coordinator | | |

NOTE

1. One person in the TSC **SHALL** be qualified as a Severe Accident Management Evaluator.
2. Additionally, one of the four (4) TSC engineers **SHALL** be qualified to perform Core Damage Assessment. Typically a Nuclear or Chemistry engineer meets this criteria.

- b. **IF** anyone reporting for duty is suspected of **NOT** being Fit for Duty. **THEN** contact Security to perform Fitness for Duty Testing.

NOTE

In minimum staffing situations, collateral assignments may include:

- Operations Line Phone Talker
- Engineering Line Phone Talker
- Major Equipment and Plant Status Board Maintenance
- Plant Process Computer Accesser.

- c. If desired, assign a phone talker to the **Operations Line** to log emergency related communications sent to and received by the TSC using the copies of the Telephone Communication Log Sheet (Exhibit 2 of EPIP-TMI-.05, Communications and Record Keeping).

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EXHIBIT 1

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- d. If desired, assign a phone talker to the **Engineering Line** to log emergency related communications sent to and received by the TSC using the copies of the Telephone Communication Log Sheet (Exhibit 2 of EPIP-TMI-.05, Communications and Record Keeping).
- e. If necessary, assign an individual to access the Plant Process Computer in accordance with Exhibit 3, Technical Support Center Data Collection and Analysis Checklist.
- f. If necessary, assign an individual to be responsible for maintaining the status boards.
- g. IF evacuation of the TSC is required **THEN** relocate to the Back-up TSC, in accordance with Exhibit 4.
- h. **WHEN** Protected Area Accountability is required (e.g., at the declaration of a Site Area Emergency or General Emergency or when ordered by the Emergency Director) perform the following:
 - Announce to all TSC personnel that Protected Area Accountability has been ordered.
 - Assign someone to collect the key cards of ALL TSC personnel and process them at the Accountability Card Reader in the Control Room.
 - a) Place each key card against the face of the Accountability Card Reader. The **GREEN** light will flash to acknowledge accountability. If a **RED** light flashes notify Security at extension 8039 and provide the number of the key card causing the problem.

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EXHIBIT 2

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NOTE

Steps not currently applicable or not required should be left blank in case those steps become applicable as the emergency evolves.

NOTE

The following steps are provided in an order likely to result in the most efficient response. However, due to the dynamic and unpredictable nature of emergencies associated with a nuclear power facility, the order of performing the steps may be modified to cope with existing conditions. Modifying the specific order of performance of these steps will have no adverse consequences.

Engineering Line Communicator Checklist

- a. Establish and maintain communications with the ECC on the Engineering Line.
 - Log emergency related communications sent to and received by the TSC using copies of the Telephone Communication Log Sheet (Exhibit 2 of EPIP-TMI-.05, Communications and Record Keeping) located in the TSC.

- b. If requested by the TSC Coordinator contact Framatome Technologies Inc. (FTI) for a Site Area Emergency, General Emergency or at the discretion of the TSC Coordinator.
 - Contact (Brendon Brooks) FTI Supervisor Plant Operations Group
 - a. Use a MERIDIAN telephone and dial one of the following numbers:

Work: 9-1-804-832-3219 or Home 9-1-804-384-6598

 - If unsuccessful use the "B & W" Phone" and dial 9-1-804-832-2874.
 - b. Provide the following message, if appropriate:

This is _____ calling from Three Mile Island.
(Name)

We have declared a [A General Emergency] at _____ hours.
[A Site Area Emergency]
[An Alert]
[An Unusual Event]
(Select One)

- c. Answer FTI questions concerning the emergency using information from the status boards.

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EXHIBIT 2

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c. Ensure that the Engineering Line is established between the following, as appropriate:

- ECC
- Technical Support Center
- EOF Technical Staff

d. IF a telephone problem occurs, perform the following:

NOTE

All telephone trouble calls are to be reported to the ECC Communications Coordinator at the TMI-1 Control Room (ECC). The ECC Communications Coordinator is located in the Shift Managers Office.

- Contact the ECC Communications Coordinator at extension 8778 and provide the following information:
 - a) Name of person reporting the trouble.
 - b) The location (facility) where the trouble is occurring.
 - c) The name of the circuit in trouble.
(i.e., Operations Line)
 - d) A brief description of the trouble you are encountering.

e. When the emergency is closed out, perform the following:

- _____ • As applicable, notify Framatome Technologies Inc.
- _____ • Collect all applicable TSC documentation (i.e., logs, used procedures, computer printouts, etc.).
 - a) Send to the Emergency Preparedness Group, TMI Training Building 2.
- _____ • Ensure that the TSC is returned to the proper readiness condition. An inventory of the TSC is required to be performed by the end of the working day following the end of the event. Notify the Manager, System Engineering or designee of the need to perform the inventory in accordance with TEP-ADM-1300.01.

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EXHIBIT 3

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NOTE

The following steps are provided in an order likely to result in the most efficient response. However, due to the dynamic and unpredictable nature of emergencies associated with a nuclear power facility, the order of performing the steps may be modified to cope with existing conditions. Modifying the specific order of performance of these steps will have no adverse consequences.

**Technical Support Center
Data Collection and Analysis Checklist**

- a. Use the "TSC Engineering Calculations Guide" as necessary to assist in developing recommendations.
- b. **IF** the Unit has experienced a Loss-of-Offsite-Power, proceed as follows; if not, proceed with Step 3:
 - Obtain a "French" style adapter plug from the ED/SM in the Control Room. The plugs are located in the left-hand cabinet of the Control Room Supervisor's desk.
 - Place the adapter plug in the receptacle in the Northwest corner of the TSC. This plug is fed from breaker #10 of ATB.
 - Remove all loads from the power strip under the PPC monitor desk and plug the power strip into the adapter plug.

CAUTION

Do not plug in the Laser Jet Printer.

- c. Plug the following loads into the power strip as needed:
 - CPU for PPC/PC
 - Monitor for PPC/PC
 - HP Plotter
 - OMNIMUX
 - IBM Mainframe Modem
 - Any other PC and Monitor
- d. Turn on the power strip and attached loads.

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EXHIBIT 3

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- a. Activate the computer terminal in accordance with the instructions below and commence performing accident assessment functions by monitoring present plant parameters and conducting trend analysis of key parameters.

TSC

PLANT PROCESS COMPUTER ACCESS INSTRUCTIONS

NOTE

Steps in the following Section are to be performed in the order shown.

- _____ 1. To put computer on line/take it off line, verify system is energized or energize system.

NOTE

This is for the dedicated line access.

- _____ 2. Press the following keys simultaneously "Shift" and "On Line".

NOTE

This may not work on the first attempt - try again. If the system does not come on line to access the PPC, refer to Exhibit 5, "ERF Terminal User Trouble Shooting Instructions."

- _____ 3. If PPC access is granted the words "Off Line" at the bottom right hand corner of the screen will disappear.
- _____ 4. Press the key marked "GROUP" or any other function key to access the PPC.
- _____ 5. Enter the number of the area you wish to access, and press "Execute".
- _____ 6. Press the "Print" button to print the screen you are viewing (other functions are per users guide).
- _____ 7. To quit, press the following keys "Shift" and "On Line" simultaneously.

NOTE

To present a clear screen (no data), press "cancel" twice.

- b. Notify the TSC Coordinator that the TSC Data Collection and Analysis functions are operational.
- Inform the TSC Coordinator of any exceptions.

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EXHIBIT 4

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NOTE

Steps not currently applicable or not required should be left blank in case those steps become applicable as the emergency evolves.

NOTE

The following steps are provided in an order likely to result in the most efficient response. However, due to the dynamic and unpredictable nature of emergencies associated with a nuclear power facility, the order of performing the steps may be modified to cope with existing conditions. Modifying the specific order of performance of these steps will have no adverse consequences.

Backup TSC Activation

- a. If the Unit has experienced a Loss-of-Offsite-Power, proceed as follows; if not, proceed with Step 2.0:
- Obtain two (2) "French" style adapter plugs from the ED/SM in the Control Room. The plugs are located in the left-hand cabinet of the Control Room Supervisor's desk.
 - Place the adapter plug in the receptacle in the Southwest corner of the B/U TSC. These plugs are fed from breaker #14 of ATB.
 - Remove all loads from the power strip under the PPC monitor desk and plug the power strip into the adapter plug.

CAUTION

Do not plug in the Laser Jet Printer.

- b. Plug the following loads into the power strip as needed:
- CPU for PPC/PC
 - Monitor for PPC/PC
 - HP Plotter
 - OMNIMUX
 - IBM Mainframe Modem
 - Any other PC and Monitor
 - Turn on the power strip and attached loads.

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EXHIBIT 4

Page 2 of 2

- c. Actuate the Zetron (Radio) by selecting TSC (Position B) 2nd floor.
- d. Direct the Engineering Communicator to contact Framatome Technologies Inc. in accordance with Exhibit 2, Engineering Line Communicator Checklist if requested on Exhibit 2.
- e. Assign an individual to access the Plant Process Computer in accordance with Exhibit 3, Technical Support Center Data Collection and Analysis Checklist.
- f. When Protected Area Accountability is required, (i.e., at the declaration of a Site Area Emergency or General Emergency or when ordered by the Emergency Director) perform the following:
 - Announce to all TSC personnel that Protected Area Accountability has been ordered.
 - Direct TSC personnel to go to the Accountability Card Reader on the Northeast wall of the Back-up TSC to perform the accountability.
 - An individual may be assigned to collect all of the key cards and process them at the Accountability Card Reader.
 - Place each key card against the face of the Accountability Card Reader. The GREEN light will flash to acknowledge accountability. If a RED light flashes, notify Security at extension 8039 and provide the number of the key card causing the problem.
- g. When the emergency is closed out follow the instructions in Exhibit 2, Engineering Line Communicator Checklist.

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EXHIBIT 5

Page 1 of 1

Emergency Response Facility (TSC, EOF) Terminal User Troubleshooting Instructions

IF there is a PURPLE cursor and the unit does not accept input or the time is not updating.

THEN press the CLEAR key and proceed with data collection.

IF the terminal is not responding and the time is not updating.

THEN perform the following:

1. Press the CLEAR key
2. Press the SHIFT and ON LINE keys

IF the terminal goes on line proceed with data collection.

If the terminal goes off line press the keys again (SHIFT and ON LINE) to go on line and proceed with data collection.

If the terminal is not responding, the time is not updating AND Steps 1.0 and 2.0 were unsuccessful.

THEN press the RESET button on the PC to restart (reboot the PC)
Wait for the screen to display "Aydin Controls" before pressing the SHIFT and ON LINE keys to place the terminal on line and proceed with data collection.

If the terminal is still not responding, the time is not updating and Steps 1.0, 2.0 and 3.0 were unsuccessful.

THEN contact the Process Computer Group person listed on the IREO Duty Roster as "Computer".

FOR INFORMATION ONLY

AmerGen

TMI - Unit 1
Emergency Procedure

Number

EPIP-TMI-.29

Title

OSC Operations

Revision No.

15

Applicability/Scope

USAGE LEVEL

Effective Date

TMI Division

2

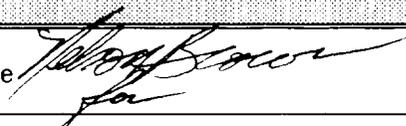
OCT 20 2000

This document is within QA plan scope
Safety Reviews Required

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	Signature	Date
Originator	A. J. Knoche 	9/25/00
Procedure Owner	/s/ A. J. Knoche	9/14/00
PRG	/s/ E. R. Frederick for J. S. Schork	9/23/00
Approver	/s/ N. Brown	9/20/00

	TMI - Unit 1 Emergency Procedure	Number EPIP-TMI-.29
Title OSC Operations	Revision No. 15	

1.0 **PURPOSE**

The purpose of this procedure is to provide guidance for activation and operation of the Operations Support Center (OSC). Guidance is also provided for Search and Rescue Operations, Emergency Repair/Operations and In-Plant Radiological Controls.

2.0 **APPLICABILITY/SCOPE**

- This procedure is applicable to all Operations Support Center personnel.
- The OSC is activated during an Alert, Site Area, or General Emergency or when directed by the Emergency Director.

3.0 **DEFINITIONS**

IREO - Initial Response Emergency Organization

4.0 **RESPONSIBILITIES**

- The Operations Support Center Coordinator (OSCC) is responsible for coordinating OSC activities.
- The security representative is responsible, except during security related emergencies, for coordinating Protected Area Access Control and for coordinating the location and movement of security personnel with the OSCC and the Radiological Controls personnel in the OSC.
- The Radiological Assessment Coordinator (RAC) is responsible for in-plant Radiological Controls coverage, habitability surveys of the OSC, and Radiological Controls support for the site evacuation until the Rad Con Coordinator (RCC) position is filled. Thereafter, the RCC is responsible for these actions.
- The Chemistry Coordinator is responsible for coordinating all chemistry samples and analysis.
- The Emergency Maintenance Coordinator (EMC) is responsible for carrying out emergency maintenance, repair, damage control, and corrective actions as deemed necessary by the OSC Coordinator.

5.0 **PROCEDURE**

- 5.1 The OSC Coordinator (Maintenance Team Leader/IREO OSC Coordinator) will perform the applicable steps of Exhibit 1.
- 5.2 A Rad Con Technician/IREO Rad Con Coordinator will perform the applicable steps of Exhibit 2.

NOTE

The Radiological Controls Coordinator (RCC) and Emergency Maintenance Coordinator (EMC) are not on-shift emergency organization positions.

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5.3 The Senior Chem Tech/Chemistry Coordinator will perform the applicable steps of Exhibit 3.

5.4 The Emergency Maintenance Coordinator will perform the applicable steps of Exhibit 4.

6.0 **REFERENCES**

- TMI Emergency Plan
- TMI Emergency Plan Implementing Procedure EPIP-TMI-.05, Communications and Record Keeping
- TMI Emergency Plan Implementing Procedure EPIP-TMI-.16, Contaminated Injuries
- TMI-1 Security Procedure TSEC-IMP-1530.01, Personnel Accountability During Site Area/General Emergencies

7.0 **EXHIBITS**

- Exhibit 1 - OSC Coordinator Checklist
- Exhibit 2 - In-Plant Rad Controls Checklist
- Exhibit 3 - Chemistry Coordinator Checklist
- Exhibit 4 - Emergency Maintenance Coordinator Checklist
- Exhibit 5 - Search and Rescue Checklist
- Exhibit 6 - Emergency Repair/Operations Checklist
- Exhibit 7 - Emergency Team Briefing/Debriefing Checklist
- Exhibit 8 - Dose Limits for Emergency Personnel
- Exhibit 9 - Heat Stress Control
- Exhibit 10 - Protected Area Accountability
- Exhibit 11 - OSC Intercom System Operation
- Exhibit 12 - OSC Emergency Team Status Form
- Exhibit 13 - OSC Personnel Roster
- Exhibit 14 - OSC Utilization

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EXHIBIT 1

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OSC Coordinator Checklist

- 1.0 Activate the OSC and coordinate the in-plant support of emergency operations by completing the following steps (initial the space provided for actions taken):

NOTE

Steps not currently applicable or not required should be left blank in case those steps become applicable as the emergency evolves.

NOTE

The following steps are provided in an order likely to result in the most efficient response. However, due to the dynamic and unpredictable nature of emergencies associated with a nuclear power facility, the order of performing the steps may be modified to cope with existing conditions. Modifying the specific order of performance of these steps will have no adverse consequences.

INITIALS

- _____ 1.1 Print your name on the OSC status board under the OSC Coordinator position.
- _____ 1.2 Pin on the position tag for the OSC Coordinator.
- _____ 1.3 Announce to the personnel in the OSC that you are assuming the duties of the OSC Coordinator.
- _____ 1.4 Distribute the appropriate checklist to the lead OSC staff members.
 - _____ a. Exhibit 2 to the Rad Con Coordinator if available, or to a Rad Con Technician if available.
 - _____ b. Exhibit 3 to the Chemistry Coordinator (Chemistry Technician or duty roster Chemistry Coordinator).
 - _____ c. Exhibit 4 to the Emergency Maintenance Coordinator (Maintenance Team Leader or duty roster Emergency Maintenance Coordinator).
- _____ 1.5 Contact the Operations Coordinator in the Control Room and request that he/she direct all Auxiliary Operators to report their location to you by radio or page phone. Also request that the Control Room coordinate the movement of Auxiliary Operators in the plant through the OSC.
- _____ 1.6 Assign a person to activate the Operations Line and start a log. The log can be kept on the pre-printed log sheets in the holder above the Operations Line phone or in the bound OSC log book.

(See EPIP-TMI-.05, Communications and Record Keeping for guidance.)
- _____ 1.7 Determine the in-plant priorities from the Emergency Director and assign available personnel to address these priorities. List the priorities on the status board.

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- ___ 1.8 Establish a roster of OSC personnel using Exhibit 13.
 - ___ 1.9 Consider the need to call out additional personnel.
 - ___ 1.10 Begin tracking emergency teams/individuals as they are dispatched from the OSC. Use the status board and/or the Emergency Team Status Form (Exhibit 12). When the duty roster OSC Coordinator Assistant arrives, assign team tracking to him/her.
 - ___ 1.11 If Protected Area Accountability is required (i.e., at the Site Area Emergency or General Emergency declaration or earlier if ordered by the Emergency Director), refer to Exhibit 10 for instructions.
 - ___ 1.12 Set up the ED intercom as follows:
 - a. Energize the amplifier (located on the underside of the shelf below the ED intercom) by sliding the power switch to the "ON" position and verifying that the red power L.E.D. is lit.
 - b. Adjust the "Select Volume" knob to at least half way (i.e., 12 o'clock).
 - ___ 1.13 If relieved by an OSC Coordinator, provide a briefing on the current plant status and turn the duties over to him/her.
 - ___ 1.14 If anyone reporting for duty is suspected of NOT being Fit For Duty, (as reported by the individual or by others) contact Security to perform Fitness For Duty testing.
 - ___ 1.15 When the OSC is fully staffed with personnel from the duty roster, notify the Emergency Director Assistant in the Control Room (extension 8070, [2070 during drills]). Provide the names of the personnel in each position to the Emergency Director Assistant.
 - ___ 1.16 Establish an OSC Watch Bill if operations have the potential to exceed twelve hours. Refer to Communications and Record Keeping Procedure EPIP-TMI-.05 for guidance.
- 2.0 The following is a list of additional duties that the OSC Coordinator should oversee. They are not necessarily listed in the order they are to be performed or in order of priority. The OSC Coordinator must periodically review the list to ensure that they are adequately covered.
- Pursue the following activities as directed by the Emergency Director:
 - a. Search and Rescue (see Exhibit 5)
 - b. Emergency Repair/Operations (see Exhibit 6)
 - c. Damage Control

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NOTE

If keys are needed to perform any repair/operation, they can be obtained from the key locker at the remote shutdown (RSD) control panel area located on the second floor of the control tower on the south wall of the backup Tech Support Center.

- Coordinate in-plant repairs with the Tech Support Center, if the facility is operational.
- If personnel are injured and/or contaminated, inform the Emergency Director and ensure that medically trained and/or Rad Controls personnel are responding.
- Utilize the OSC Security Representative to coordinate access control to the Protected Area and to coordinate the movements of Site Protection personnel in the plant.

NOTE

For security events, the Security Representative will not report to the OSC. In such events, coordinate with security in the CAS at ext. 8039.

- Retransmit Emergency Director Briefings using the OSC Intercom to allow all OSC personnel to be updated simultaneously. If OSC Coordinator briefings to key OSC staff members contain significant additional information or information relevant to the standby personnel, use the OSC Intercom to transmit that information. (Instructions for the OSC Intercom are found in Exhibit 11).
- If problems are encountered with the telephone system, request resolution from the ECC Communications Coordinator.
- Ensure that the Radiological Controls personnel:
 - a. Monitor habitability in the OSC.
 - b. Consider the need for frisking stations at OSC entrances.
- If evacuation of the OSC becomes necessary:
 - a. Contact teams in the plant and advise them of the OSC evacuation and the backup location.
 - b. Gather the OSC logs, procedures, radios, emergency telephones with cords, headsets, rad instruments and emergency locker equipment for transfer to the backup location.
 - c. Relocate to the backup OSC on the 355' elev. of the Control Building.
 - d. Set up the OSC in the available space. Connect the telephones to the labeled wall jacks and establish communications.

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- e. Fill in the current information on the status boards.
- f. Establish a frisking station at the backup OSC entrance.

3.0 Upon close-out of the emergency and direction from the Emergency Director to deactivate the facility, perform the following:

- a. Gather all logs, records and any procedures which were utilized during the emergency and turn them over to a member of the Emergency Preparedness Department.
- b. Ensure that the facility is returned to its pre-emergency condition if possible and emergency equipment is re-stocked in the emergency lockers.

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In-Plant Rad Controls Checklist

INITIALS

1.0 Perform the in-plant radiological controls function by completing the following steps (initial the space provided for action taken):

NOTE

Steps not currently applicable or not required should be left blank in case those steps become applicable as the emergency evolves.

NOTE

The following steps are provided in an order likely to result in the most efficient response. However, due to the dynamic and unpredictable nature of emergencies associated with a nuclear power facility, the order of performing the steps may be modified to cope with existing conditions. Modifying the specific order of performance of these steps will have no adverse consequences.

- _____ 1.1 Assess in-plant radiological conditions based on available information such as RMS readings, in-plant surveys, samples, etc. Keep the OSC Coordinator (OSCC) and RAC (if applicable) informed of the conditions.
- _____ 1.2 Dispatch field monitoring teams as directed by the RAC. Request drivers for the teams from the OSC but do not delay teams while waiting for drivers to be assigned. Ensure vehicles are available and ensure that current dose information is verified for techs and drivers.
- _____ 1.3 Implement habitability monitoring in the OSC.
- _____ 1.4 If the backup TSC is in use, implement habitability monitoring in the backup TSC.

NOTE

The following steps (1.5 through 1.7) are to be implemented by the Initial Response Emergency Organization Rad Controls Coordinator upon assuming the duties.

- _____ 1.5 Print your name on the OSC status board under the Rad Con Coordinator (RCC) position.
- _____ 1.6 Pin on the position tag for Rad Con Coordinator.
- _____ 1.7 Activate the In-Plant Rad Con Line or the Radiological Line and establish contact with the Radiological Assessment Coordinator (RAC) and start a log. Assign a log keeper/phone talker if someone is available.

(See EPIP-TMI-.05, Communications and Record Keeping for guidance.)

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2.0 The following is a list of in-plant rad controls duties. They are not necessarily listed in the order they are to be performed or in order of priority. This list must be reviewed periodically to ensure that the functions are adequately covered.

- Provide radiological support for Emergency Repair, Search and Rescue, Fire Brigade, etc. as requested by the OSCC or Emergency Maintenance Coordinator (EMC).
- Ensure radiological briefings are provided for in-plant teams.
- Call out additional Rad Con Techs as needed.
- Personnel Radiation Exposure Monitoring:
 - a. Ensure proper dosimetry is issued as needed. Track accumulated doses for personnel required to enter areas of high radiation dose rates. Utilize the REM-ON-LINE system or manual backup to document doses and stay times.
 - b. For those situations where the REM system is not sufficiently updated to support processing of NRC personnel into RWP areas, the following guidelines should be used to support such entries as requested by NRC personnel:
 - > Confirm the individual has either a TMI or NRC Whole Body TLD. Baseline bioassay is not required.
 - > Discuss the radiological conditions likely to be encountered and the protective equipment/methods required to be used as specified on the RWP. If the individual does not feel sufficiently trained to enter the area due to his/her past training/experience, provide an escort. NRC personnel will make the determination relative to their qualifications to use respiratory protection equipment, if required.
 - > Obtain a verbal annual dose bank estimate from the individual and ensure that the bank is sufficient to support the proposed entry.
 - > Manually collect the RWP entry/exit data such that the information can be input into the REM system at a later date.
- Coordinate Rad Con Tech actions in obtaining in-plant surveys/samples to support assessment of plant conditions and emergency response.
 - a. Radiation Surveys:

When high dose-rate conditions exist, Radiological Controls personnel should not be used for the sole purpose of performing dose-rate surveys. Other duties (for which he/she is qualified and has been briefed) may be performed while radiation levels are determined with all information documented for use by others requiring access.

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b. Airborne Surveys:

- > When emergency access is required to areas where known or suspected airborne radioactivity exists, the need for respiratory protection shall be evaluated.
 - > Life saving activities may take precedence.
 - > Air samples should be taken unless authorized otherwise by the RAC.
 - > Where practical, in order to minimize exposure, air samples should be obtained by personnel making entries for other purposes.
 - > Whole Body Counts of personnel should be used to evaluate the effectiveness of the respiratory protection program, and the need for additional concern for personnel who have made entries.
 - > Unless continuous air monitoring is available, air samples should be used as guidance in determining respiratory requirements during emergency conditions.
- If in-plant conditions warrant, set up friskers and step-off pads at the entrance(s) to the OSC.
 - Ensure that areas which are radiologically affected by the emergency are properly controlled (e.g., Turbine Bldg. postings for a primary to secondary leak).
 - Ensure that inadvertent entry into areas of high dose rate does not occur by implementation of one or more of the following controls.
 - a. Request the Ops. Support Center Coordinator to have the Control Room make an announcement over the public address system identifying the locations of those areas that are off limits due to radiological hazards.
 - b. Lock doors at all possible entry points.
 - c. Post signs at all possible entry points.
 - d. Post personnel in low background areas at all possible entry points that cannot be secured by other means.
 - e. Personnel access should be restricted and logged appropriately.

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- If site evacuation of non-essential personnel is required, provide Rad Con support by completing Exhibit 2 of EPIP-TMI-.36, Emergency Assembly and Site Evacuation.
- Periodically provide updated status to the following positions , as applicable: RAC, OSCC, and Rad Con Techs.
- If an RCS Post Accident Sample has been requested, coordinate Rad Controls support with the Chemistry Coordinator.
- Consider evacuation of the OSC if actual or projected dose exceeds 1 REM Total Whole Body Dose (TEDE). Consult with the RAC and OSCC regarding this determination. If evacuation is necessary:
 - a. Contact Rad Con Techs in the plant and advise them that the OSC is being evacuated to the backup location in the Group Operations Supervisor Office.
 - b. Gather the logs, procedures, radios, telephones with cords, headsets, rad instruments, portable counting equipment, emergency locker equipment and locked high rad keys/inventory sheets for transfer to the backup OSC.
 - c. Minimize personnel doses and the spread of contamination during the evacuation.
 - d. Establish access control, habitability monitoring, communications, etc. at the backup OSC.
- When needed, access the Reuter-Stokes data via the Emergency Information Network (i.e., RAC Code).
- As soon as necessary, the Radiological Controls Coordinator should assign an individual(s) to maintain radiological controls supplies and equipment. Segregation of contaminated materials for eventual decontamination or discarding should occur.
- Assign a specific individual to ensure contaminated personnel are properly evaluated and decontaminated. Control Point personnel must be aware of the location of decontamination facilities, and ensure contaminated personnel are directed to the facility.
- Upon close-out of the emergency and direction from the OSCC to deactivate the facility, perform the following:
 - a. Gather all logs, records, surveys, sample results and any procedures which were utilized during the emergency and turn them over to the Radiological Controls Field Operations Manager.
 - b. Ensure that the facility is returned to its pre-emergency condition if possible and emergency equipment is re-stocked in the emergency lockers.
 - c. An inventory of the OSC facility is required to be performed by the end of the working day following the end of the event/drill. The inventory is the responsibility of Rad Con Field Ops. Notify the Manager of Rad Con Field Ops of the need to perform the inventory in accordance with procedure TEP-ADM-1300.01, Maintaining Emergency Preparedness.

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Chemistry Coordinator Checklist

- 1.0 Assist in the activation of the OSC and provide chemistry support by completing the following steps (initial the space provided for actions taken):

NOTE

Steps not currently applicable or not required should be left blank in case those steps become applicable as the emergency evolves.

NOTE

The following steps are provided in an order likely to result in the most efficient response. However, due to the dynamic and unpredictable nature of emergencies associated with a nuclear power facility, the order of performing the steps may be modified to cope with existing conditions. Modifying the specific order of performance of these steps will have no adverse consequences.

INITIALS

- ___ 1.1 Print your name on the OSC status board under the Chemistry Coordinator position.
 - ___ 1.2 Pin on the position tag for Chemistry Coordinator.
 - ___ 1.3 Establish a Chemistry Coordinator log.

(See EPIP-TMI-.05, Communications and Record Keeping for guidance).
 - ___ 1.4 Assess the current status of plant chemistry control and brief the OSC Coordinator (OSCC).
 - ___ 1.5 Brief on-shift Chemistry Techs on the current status and advise them to be aware of possible elevated activity in any plant samples.
 - ___ 1.6 Consider the need to call out additional chemistry assistance (e.g., duty chemist, etc.).
- 2.0 The following is a list of the duties of the Chemistry Coordinator. They are not necessarily listed in the order they are to be performed or in order of priority. The Chemistry Coordinator must periodically review the list to ensure that they are adequately covered.
- Coordinate all plant chemistry sample taking and analysis. Prioritize samples in cooperation with the RAC and the OSCC.
 - Coordinate RCS PAS, MAP-5, and/or CAT PASS sampling and analysis as directed. Coordinate with the Rad Assessment Coordinator (RAC)/Rad Con Coordinator (RCC) for radiological coverage of these samples.
 - Provide sample results to both the OSCC and the Radiological Assessment Coordinator (RAC).

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Emergency Maintenance Coordinator Checklist

- 1.0 Assist in the activation of the OSC and provide support in emergency maintenance, repairs, damage control, search and rescue, and corrective actions by completing the following steps (initial the space provided for actions taken):

NOTE

Steps not currently applicable or not required should be left blank in case those steps become applicable as the emergency evolves.

NOTE

The following steps are provided in an order likely to result in the most efficient response. However, due to the dynamic and unpredictable nature of emergencies associated with a nuclear power facility, the order of performing the steps may be modified to cope with existing conditions. Modifying the specific order of performance of these steps will have no adverse consequences.

INITIALS

- ___ 1.1 Print your name on the OSC status board under the Emergency Maintenance Coordinator (EMC) position.
- ___ 1.2 Pin on the position tag for Emergency Maintenance Coordinator.
- ___ 1.3 Establish an Emergency Maintenance Coordinator Log.
(See EPIP-TMI-.05, Communications and Record Keeping for guidance).
- ___ 1.4 Determine from the OSC Coordinator (OSCC) the priorities for in-plant repairs, damage control, etc.
- ___ 1.5 Establish a standby area for Operations and Maintenance personnel awaiting assignment.
- 2.0 The following is a list of the duties of the Emergency Maintenance Coordinator. They are not necessarily listed in the order they are to be performed or in order of priority. The Emergency Maintenance Coordinator must periodically review the list to ensure that they are adequately covered.
- Consider establishing a "Ready Team" for immediate response into the plant. The team should be briefed on known plant conditions and hazards and should be prepared to respond in full PC's and SCBA.
 - If Search and Rescue is needed, refer to Exhibit 5 for instructions. Exhibit 7 is for briefing and debriefing the team.
 - If Emergency Repair/Operations is needed, refer to Exhibit 6 for instructions. Provide technical briefings, as needed, to teams.

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- Coordinate with the Radiological Controls Coordinator (RCC)/RAC to ensure in-plant teams are provided radiological briefings prior to dispatch, if needed.
 - Keep the OSCC informed of the status of in-plant emergency teams, their work progress and findings.
- 3.0 Upon close-out of the emergency and direction from the OSCC to deactivate the facility, perform the following:
- a. Gather all logs, records, and any procedures which were utilized during the emergency and turn them over to the OSCC.
 - b. Ensure that the facility is returned to its pre-emergency condition if possible.

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Search and Rescue Checklist

- 1.0 This Exhibit should be implemented by the Emergency Maintenance Coordinator/Search and Rescue Team Leader during declared emergencies when:

NOTE

Steps not currently applicable or not required should be left blank in case those steps become applicable as the emergency evolves.

NOTE

The following steps are provided in an order likely to result in the most efficient response. However, due to the dynamic and unpredictable nature of emergencies associated with a nuclear power facility, the order of performing the steps may be modified to cope with existing conditions. Modifying the specific order of performance of these steps will have no adverse consequences.

- One or more individual(s) is/are unaccounted for and cannot be contacted for 1 hour from on-set of accountability or, as directed by TSEC-IMP-1530.01, Pers. Accty. During Site Area/Gen. Emerg.
- Individual(s) is/are unable to exit an area without assistance.
- Directed by the Emergency Director/Operations Support Center Coordinator (OSCC)

2.0 Team Activation

NOTE

Team personnel should consist of volunteers if members may exceed exposure limits of 10 CFR 20 (See Exhibit 8).

- _____ 2.1 Assemble team(s) consisting of Operations, Maintenance, and Rad Con personnel with current first aid training if possible.
- _____ 2.2 Appoint a team leader.
- _____ 2.3 Designate communications equipment to be used.
- _____ 2.4 Ensure each team receives a briefing to the extent appropriate prior to dispatch into the plant.
 - _____ a. Complete an Exhibit 7 as a guide during the briefing.
 - _____ b. Identify who is missing and the last known or suspected location.
 - _____ c. Establish a search pattern and assign team members specific areas and a general sequence of the search.

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____ 2.5 Continue attempts to locate the individual(s) using the plant page.

3.0 Team Deployment

- Individual searchers may be sent into non-hazardous areas.
- Team members should disperse as much as possible to increase the speed of covering each area. If needed, team members may converge on a location to assist other team members or the missing party.
- When a missing individual is found, provide immediate assistance as appropriate.
- Relay the following information to the OSC Coordinator.
 - a. Name and badge number of individual found.
 - b. Situation report and location.
 - c. Injuries and first aid provided/in progress (if any).
 - d. Contamination levels (if any).
 - e. First Aid/Rescue resources needed (if any).
- Continue to provide aid and assistance as appropriate until the situation is resolved.

4.0 Team Deactivation

____ 4.1 Debrief the team. Complete an Exhibit 7 as a guide.

____ 4.2 Stage deactivated team members for reassignment if appropriate.

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Emergency Repair/Operations Checklist

NOTE

Steps not currently applicable or not required should be left blank in case those steps become applicable as the emergency evolves.

NOTE

The following steps are provided in an order likely to result in the most efficient response. However, due to the dynamic and unpredictable nature of emergencies associated with a nuclear power facility, the order of performing the steps may be modified to cope with existing conditions. Modifying the specific order of performance of these steps will have no adverse consequences.

1.0 This Exhibit should be implemented by the Emergency Maintenance Coordinator when it becomes necessary to:

- Manipulate or repair equipment in order to substantially reduce in-plant radiation levels or radiation exposure to the general public.
- Perform equipment repairs and operate plant equipment to stabilize plant conditions.
- Perform other repair actions deemed necessary and authorized by the Emergency Director.

2.0 Team Activation

a. Consider the following factors when assembling teams.

- Team personnel should consist of volunteers if members may exceed exposure limits of 10 CFR 20 (See Exhibit 8).
- Team members should possess the necessary qualifications to perform the task.
- Assignments in abnormally hazardous areas (steam, radiation, etc.) should consist of two or more members.
- Assignments in an area without unusual hazards may be performed by an individual.

_____ b. Assemble the team using the appropriate available discipline(s).

_____ c. Request engineering support if appropriate.

_____ d. Appoint a team leader.

_____ e. Provide a technical and radiological briefing for each team. Complete a Briefing/Debriefing Checklist (Exhibit 7) for each team deployed.

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_____ f. Controlled keys may be obtained from the remote shutdown control panel key locker on the second floor of the Control Building.

3.0 Team Deployment

- Obtain periodic progress reports from each team.
- Provide significant status change information to the OSC Coordinator for relay to the Emergency Control Center.
- If appropriate, develop a contingency plan if key component repairs cannot be completed.

4.0 Team Deactivation

_____ a. Debrief the team. Complete a Debriefing Checklist (Exhibit 7) for each team.

_____ b. Stage deactivated team members for reassignment if appropriate.

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Emergency Team Briefing/Debriefing Checklist

NOTE

Steps not currently applicable or not required should be left blank in case those steps become applicable as the emergency evolves.

NOTE

The following steps are provided in an order likely to result in the most efficient response. However, due to the dynamic and unpredictable nature of emergencies associated with a nuclear power facility, the order of performing the steps may be modified to cope with existing conditions. Modifying the specific order of performance of these steps will have no adverse consequences.

1. Date: _____ Time: _____
2. Type of Team: Emergency Repair/Operations, Search and Rescue, Damage Control
3. Team Mission: _____

4. Team Members:

	Name	Badge #	Authorized Dose:*		Signature
			Total Whole Body Dose (TEDE)	Thyroid Dose (CDE)**	
a.	_____	_____	_____	_____	_____
b.	_____	_____	_____	_____	_____
c.	_____	_____	_____	_____	_____
d.	_____	_____	_____	_____	_____

** Thyroid dose (CDE) (mrem) due to airborne iodine = DAC hours from iodine x 25

* Authorized by:

Name of Emergency Director

Name of Rad Assessment Coordinator/Rad Con Coordinator

5. Nature and extent of hazards (radiological, industrial, haz-mat, etc.) that the team is expected to encounter:

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6. General Briefing Items:

Initials

- ___ A. Ensure that the team can maintain communications at frequent intervals with the OSC via radio, plant page or other means. Consider designating a team communicator. Test radios if used.
- ___ B. If respiratory protection is required for the team, consider equipping the team with respirator communications devices. These devices are stored in the OSC locker in the Control Tower stairwell.
- ___ C. If the team's mission is search and rescue, ensure they have first aid equipment and assign an EMT to the team if one is available.
- ___ D. Ensure that the team thoroughly understands the access and escape routes for the area or building they will be entering.

7. Radiological Concerns:

NOTE

Normal Radiological Controls Procedures should be utilized during emergency situations to the maximum extent practicable.

- ___ A. Ensure that each member of the team understands his/her dose limits. Exposure in excess of the limits of 10CFR20.1201 shall be voluntary and shall be authorized by the Emergency Director only. See Exhibit 8 for dose limits, guidance and risks.

NOTE

Emergency team member selection for teams expected to receive doses in excess of 10CFR20.1201, should give preference to currently trained Radiation Workers who are over 45 years of age. Declared pregnant workers, or those that state they may be pregnant, should not be used.

- ___ B. Ensure proper dosimetry (TLD and digital dosimeter) is issued and use understood. Also give consideration to Annual and Lifetime Dose History.
- ___ C. If respiratory protection is required, ensure proper respiratory protection is specified and all members of the team are qualified in its use.
- ___ D. Ensure proper protective clothing is prescribed.
- ___ E. Ensure that each member of the team has been properly instructed and stay times have been discussed and are understood.

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- ___ F. Ensure instrumentation to be used has appropriate range and sensitivity and has been calibrated and operationally checked.
- ___ G. Ensure team members are briefed on any surveys to be performed (air, cont. rad.)

8. Safety and Health Concerns

Initials

- ___ A. If re-entry to a hazardous or potentially hazardous area is necessary, ensure that team members are briefed on all known/suspected conditions in the area (i.e., heat, smoke, steam, flooding, fire, toxic materials), and that they are properly prepared.
- ___ B. Ensure that the team members have all necessary safety equipment and personal protective gear. Ensure all equipment is functional.
- ___ C. If the danger of heat stress exists in the area where the team will work:
 - Team members should drink water before being dispatched and upon return. Ask Rad Controls to designate a safe source of drinking water.
 - Use Exhibit 9, Heat Stress Control to determine stay times.
 - Inform the Emergency Director of the decision to drink water if "No Eating, Drinking or Smoking" has been announced.

9. Team Debriefing:

- ___ A. Determine the conditions actually found in the areas the team entered (radiation dose rates, industrial hazards, etc.)
- ___ B. Monitor for personnel contamination and document the results.
- ___ C. Determine and document the doses received by team members.
- ___ D. Document sample and survey information. Obtain any survey data sheets.
- ___ E. Document the need for any bioassay.
- ___ F. Take nasal swabs of persons who entered in airborne contamination areas.
- ___ G. Consider thyroid blocking in accordance with Thyroid Blocking Procedure, EPIP-TMI-.44.

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Dose Limits For Emergency Personnel

Emergency measures may warrant the acceptance of greater than normal radiation exposure (doses). Lifesaving, measures to prevent substantial radiation exposure to the population or preservation of vital equipment may be sufficient cause for greater than normal exposures. The following are the exposure guidelines for these emergency activities:

- Life Saving Action - No Pre-established Limit**
- Corrective Action - 10 REM Total Whole Body Dose (TEDE)
30 REM to the lenses of the eyes
100 REM total organ dose (CDE) to any organ**

The Emergency Director is the designated individual who can authorize emergency workers to receive doses as defined in excess of the 10CFR20 limits. These emergency workers **must** be volunteers and will be required to closely adhere to the guidance and instruction provided during their briefing.

Emergency personnel should consider the risks involved in accepting the dose versus the benefits of the emergency action prior to volunteering to receive such dose. The table below is provided to assist potential volunteers in deciding whether to volunteer.

HEALTH EFFECTS FROM ACUTE WHOLE BODY DOSES:
(From Rad Health Handbook)

<25 RAD	No observable effects
25-100 RAD	Range from no symptoms to nausea. Changes in white blood cells are anticipated so the individual is more susceptible to diseases.
110 RAD	10% chance of being lethal with no medical intervention.*
340 RAD	50% chance of being lethal with no medical intervention.*
585 RAD	90% chance of being lethal with no medical intervention.*

*Note that medical intervention will approximately double the chance of survival.

NOTES

- In addition to the acute health effects, the worker may have an increased long-term risk of fatal cancer. This risk is roughly estimated to be about 2% per 25 REM of exposure (based on a risk factor of 8E-4 per REM from Table 4.3, BEIR V). By comparison, natural cancer mortality is about 20%.
- For the purpose of estimating doses for use with the table on health effects (above) use the following relationships:

1 RAD is approximately equal to 1 REM for GAMMA
1 RAD is approximately equal to 10 REM for NEUTRON

EXHIBIT 9

**Heat Stress Control
Recommended Work Time Limits (Action Times) Using Dry Bulb Temperature**

DRY BULB TEMPERATURE RANGE (°F)	LIGHT WORK				MODERATE WORK				HEAVY WORK			
	WORK CLOTHES	SINGLE PC'S	DOUBLE PC'S (min.)	WET SUIT (min.)	WORK CLOTHES	SINGLE PC'S (min.)	DOUBLE PC'S (min.)	WET SUIT (min.)	WORK CLOTHES	SINGLE PC's (min.)	DOUBLE PC'S (min.)	WET SUIT (min.)
65	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT
70	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	180
75	NO LIMIT	NO LIMIT	NO LIMIT	240	NO LIMIT	NO LIMIT	NO LIMIT	180	NO LIMIT	NO LIMIT	240	140
80	NO LIMIT	NO LIMIT	240	200	NO LIMIT	NO LIMIT	240	150	NO LIMIT	240	180	80
85	NO LIMIT	NO LIMIT	210	175	NO LIMIT	240	170	70	240	165	90	45
90	NO LIMIT	240	180	120	240	130	80	40	180	65	50	25
95	240	170	135	70	150	65	45	30	80	35	30	20
100	195	110	75	45	70	40	35	25	45	25	20	15
105	120	65	50	30	40	30	25	20	30	20	15	15
110	70	40	30	20	30	20	15	15	25	15	15	*
115	45	25	20	15	25	15	15	*	20	15	*	*
120	30	20	15	*	20	15	*	*	15	*	*	*
125	20	15	*	*	15	*	*	*	*	*	*	*
130	15	*	*	*	*	*	*	*	*	*	*	*
135	*	*	*	*	*	*	*	*	*	*	*	*
140	*	*	*	*	*	*	*	*	*	*	*	*

*These conditions present a high heat stress environment. It is required that some combination of the following countermeasures be taken, depending upon the nature of the work:

- a. Monitoring of the worker's condition by the supervisor or designee
- b. Use of personal cooling devices
- c. Stressing self-determination
- d. Drinking plenty of water prior to entering this environment
- e. Acclimating of the worker to these conditions

Guidelines for Using Personal Cooling Devices

- a. Ice Vests can double action time if properly worn. When the ice has melted the individual must leave the area and remove the ice vest.
- b. Circulating ice water garments can increase the action time by a factor of 4 or more, provided that the ice container is changed as needed, i.e., when the water temperature increases to the point that it is not providing sufficient cooling.
- c. Circulating air garments (e.g., supplied air hood/helmet and vortex tube suit) can also increase the action time by a factor of 4 or more, depending upon the temperature of the air supplied to the garment.

NOTE

These are only guidelines and do not reflect the differences in heat tolerance among the workers. Therefore, the ability of the worker to recognize the onset of symptoms of heat related illness must be stressed.

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Protected Area Accountability Checklist

Perform the following steps when Protected Area Accountability is required (i.e., at the declaration of a Site Area or General Emergency or when ordered by the Emergency Director).

NOTE

Steps not currently applicable or not required should be left blank in case those steps become applicable as the emergency evolves.

NOTE

The following steps are provided in an order likely to result in the most efficient response. However, due to the dynamic and unpredictable nature of emergencies associated with a nuclear power facility, the order of performing the steps may be modified to cope with existing conditions. Modifying the specific order of performance of these steps will have no adverse consequences.

INITIALS

- _____ A. Announce to all OSC personnel that Protected Area Accountability has been ordered.
- _____ B. Instruct the coordinators in the OSC to have their personnel process through the accountability key-card reader on the West wall near door #41. Assign someone to assist with this process, if needed (the OSC Security Representative may be available to provide assistance). **DO NOT** use the normal door #41 key-card reader for accountability processing.
- _____ C. The green light on the accountability key-card reader should flash after each card is read. This indicates that the person has been accounted for by the system. The right hand red light indicates a problem. Notify Site Protection of any badges which cause the red light to flash.
- _____ D. Contact all emergency teams and other personnel in the plant and obtain their key-card numbers (the key-card number is the hand-written number in on the reverse side of the key-card). It is important to obtain **KEY-CARD NUMBER** and **NOT SECURITY BADGE NUMBER**.
- _____ E. Enter the key-card numbers for personnel in the plant using the key-pad on the accountability key-card reader as follows:
 - 1 Press the "*" button.
 - 2 Enter the key-card digits in order.
 - 3 Then press the "*" button and pause for the green light to flash before entering the next key-card number.

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- _____ F. When all OSC personnel and emergency team personnel in the Protected Area have been processed through the accountability key-card reader, inform the Security Representative in the OSC or call the Site Protection Officer in the CAS at ext. 8039.
- _____ G. Site Protection will produce a report of any personnel in the Protected Area who did not respond to accountability. This report may be faxed to the OSC. Assist Site Protection in determining the whereabouts and status of these persons. Implement Search and Rescue per Exhibit 5, Search and Rescue Instructions, if needed.

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OSC Intercom System Operation

1.0 Pre-operational checks

- a. Verify that the power supply (gray box in the Ops/Maintenance muster area) is plugged into the nearby outlet.
- b. Verify that the 'Transmit Volume' control is at maximum. To do this, rotate the knob away from you while you are facing the unit.

2.0 Transmitting Plant Status Updates

- a. Depress all station selector buttons except for the station you are at and any blank buttons.
- b. Depress the "Talk" button (or "Talk Lock" button for hands-free use).
 - To speak - Talk in a normal voice toward the unit at a distance of 12 to 18 inches, or
 - To retransmit the Emergency Director briefing as it is given - Hold the ED intercom speaker in close proximity to the unit.
- c. When finished, release the 'Talk' button or depress the 'Talk Lock' button again to release it, as appropriate.

3.0 Two Way Communications

- a. Depress the station selector button for the station you want to contact.
- b. Depress the 'Talk' button and speak in a normal voice at a distance of 12 to 18 inches. Be sure to identify your station to the station you are calling and instruct them to depress the button on their intercom corresponding to your station.
- c. Release the 'Talk' button when you are finished and wait for a reply.
- d. To answer a call, depress the appropriate station selector button and the 'Talk' button and speak in a normal voice at a distance of 12 to 18 inches.
- e. When the conversation is completed, release the 'Talk' button and the station selector button by depressing it a second time.

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OSC Utilization

The Rad Con area is transformed into the Operations Support Center during an emergency or during drills and exercises. OSC staff members must assist in the transformation by clearing the routine Rad Con paperwork and items so that the room needed to efficiently and effectively fulfill Operations Support Center emergency responsibilities is available. Courtesy and sensitivity to the people who use the office every day dictate that Rad Con belongings and paperwork are carefully collected and stored to result in the least amount of disruption or inconvenience. The suggested use of the facility follows.

- OSC Coordinator - The OSC Coordinator should use a desk closest to the center of the room. This provides a good working surface, access to the telephones and intercom, and is centrally located. It provides accessibility to the OSC Coordinator Assistant and to the Security Representative in the hallway.
- Rad Con Coordinator - The Rad Con Coordinator and a Rad Con communicator should be stationed in the space available for this function near all of the relevant telephone and radio communications equipment.
- Operations Line Communicator - The Operations Line Communicator should be stationed at the telephone. The Operations Line telephone is located near a specially built, fold out table for log keeping.
- Emergency Maintenance Coordinator - The Emergency Maintenance Coordinator should work from any convenient desk. Space and privacy for team briefings should be a consideration in selecting a location.
- Security Representative - The Security Representative should work in the hallway outside the OSC door. This is the location of a dedicated telephone jack and the accountability key card reader.
- Chemistry Coordinator - The Chemistry Coordinator should operate from an available desk in the area.
- OSC Coordinator Assistant - The OSC Coordinator Assistant should work in the hallway outside the OSC at the team tracking status board. In this location, the OSC Coordinator Assistant will be in the route of all personnel dispatched from the OSC allowing more positive team tracking.
- Other Staff - Support staff members should work from an available desk in the area.
- Staging - Personnel awaiting assignment should be staged in a room other than that used by the OSC staff coordinators to minimize ambient noise.

FOR INFORMATION ONLY

AmerGen

TMI - Unit 1
Emergency Plan
Implementing Document

Number

EPIP-TMI-.36

Title

Emergency Assembly and Site Evacuation

Revision No.

13

Applicability/Scope

USAGE LEVEL

Effective Date

TMI Division

2

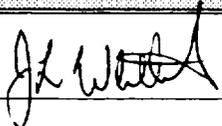
OCT 20 2000

This document is within QA plan scope
Safety Reviews Required

<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
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List of Effective Pages

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18	13						
19	13						
20	13						

	Signature	Date
Originator	J. L. Whitehead 	10/12/2000
Procedure Owner	/s/ J. L. Whitehead	09/05/00
PRG	/s/ H. K. Olive for J. S. Schork	10/03/00
Approver	/s/ N. Brown	10/03/00

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1.0 **PURPOSE**

The purpose of this procedure is to provide guidance for on-site assembly, evacuation, off-site assembly, and monitoring of non-essential site personnel and to provide guidance for off-site monitoring and decontamination of vehicles.

2.0 **APPLICABILITY/SCOPE**

This procedure applies to events requiring on-site assembly (mustering), site evacuation, and/or off-site monitoring of non-essential personnel.

3.0 **DEFINITIONS**

None

4.0 **RESPONSIBILITIES**

- A. The Emergency Assembly Area Coordinator (EAAC) is responsible for implementing Exhibit 1.
- B. The Radiological Controls Coordinator (RCC) is responsible for implementing the steps in Exhibit 2 and for directing and coordinating the implementation of Exhibits 3 and 4.
 - If the RCC position is not yet filled, the Radiological Assessment Coordinator (RAC) is responsible for Exhibit 2.
- C. The Personnel Monitoring and Decontamination Team Leader is responsible for implementing the steps in Exhibit 3.
- D. The Vehicle Monitoring and Decontamination Team Leader is responsible for implementing the steps in Exhibit 4.

5.0 **PROCEDURE**

- A. This procedure will be implemented upon the declaration of a Site Area Emergency or earlier if the Emergency Director calls for an onsite muster at the Emergency Assembly Area.
- B. If a General Emergency is declared without escalating through the Site Area Emergency classification, immediate evacuation without on-site muster may be warranted.
- C. The Emergency Assembly Area Coordinator will implement Exhibit 1.
- D. The Radiological Controls Coordinator (or RAC if RCC position is not yet staffed) is responsible for Exhibit 2 and for directing and coordinating implementation of Exhibits 3 and 4.

6.0 **REFERENCES**

- 6.1 1092, TMI Emergency Plan
- 6.2 EPIP-TMI-.05, Communications and Recordkeeping
- 6.3 6610-ADM-4330.02, Personnel Contamination Monitoring and Decontamination

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7.0 **EXHIBITS**

- 7.1 Exhibit 1, Emergency Assembly Area Coordinator Checklist
- 7.2 Exhibit 2, Radiological Controls Support for Site Evacuation and Remote Assembly
- 7.3 Exhibit 3, Personnel Monitoring and Decontamination
- 7.4 Exhibit 4, Vehicle Monitoring and Decontamination
- 7.5 Exhibit 5, Emergency Assembly Area Floor Plans
- 7.6 Exhibit 6, Warehouse Muster Sheet
- 7.7 Exhibit 7, Additional Instructions for Notifying Site Personnel
- 7.8 Exhibit 8, Site Evacuation Route Map
- 7.9 Exhibit 9, Remote Assembly Area Floor Plans
- 7.10 Exhibit 10, Example Personnel Contamination Report Form
- 7.11 Exhibit 11, Vehicle Contamination Report Form
- 7.12 Exhibit 12, Instructions for Evacuating to Williams Valley High School
- 7.13 Exhibit 13, RAA Sign-In Sheet

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Emergency Assembly Area Coordinator Checklist

The Emergency Assembly Area Coordinator (EAAC) is responsible for carrying out the actions in this exhibit.

NOTE

Conditional steps (i.e. steps containing an "if" statement) should be marked "N/A" and skipped if the condition is not met.

NOTE

If an immediate site evacuation has been ordered (i.e., without first mustering on-site), the EAAC should report directly to the Remote Assembly Area to assist with activating the facility. If the EAAC is on-site when the evacuation is ordered, he/she should perform Steps 5.4 and 5.8 in this exhibit (if applicable).

Initials

- _____ 1. When on-site mustering of non-essential personnel is required, the EAAC shall report immediately to the appropriate Warehouse to commence mustering of personnel.

- _____ 2. If Warehouse 1 is the designated Emergency Assembly Area, remove the telephone from the emergency locker and plug it into the phone jack (see floor plan, Exhibit 5 for location). This phone is extension 5500. In Warehouse 3 the phone is on the wall near the roll-up door as shown in Exhibit 5.

- _____ 3. The EAAC should:
 - A. Ensure notification of any remaining personnel in accordance with Exhibit 7.
 - Utilize personnel who have already mustered to perform this function.
 - Brief them on where the major sweep areas are and on how to use the bullhorn.
 - Inform them of any temporary/outage facilities which may need to be included in the sweep.
 - Ensure that personnel working at the Red Hill Dam construction site on the southeast side of TMI have been instructed to evacuate the site. Determine from the Emergency Director Assistant (phone extensions 8778, 8069) (for drills use the simulator equivalent numbers 2078 or 944-4300 or by page phone) which gate these personnel should use.

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Initials

NOTE

If an Alert was declared earlier the Red Hill Dam construction personnel should have evacuated already. If the Site Are or General Emergency was the initial declaration they will need to evacuate immediately.

- _____ B. Direct personnel to assemble inside the warehouse (or outside if necessary) as shown on Exhibit 5.
- _____ C. Assign individuals from among those mustering to expedite and ensure an orderly sign-in on muster sheets (Exhibit 6).

NOTE

If assistance from Site Protection Department is needed, contact them at Ext. 8040 or 8038.

- _____ D. Contact the Rad Con Coordinator (RCC) at extension 5444 or 8082 (or by page phone).
 - Inform the RCC that you will need personnel/vehicle monitoring and decontamination teams to precede the evacuees to the Remote Assembly Area (RAA).
 - Provide the RCC with the extension where you can be reached.
- _____ E. Notify the Emergency Director (ED) Assistant (phone extensions 8778, 8069) (for drills use simulator equivalent #'s 2078 or 944-4300 or by page phone) of the status of the muster and give telephone number by which he can call you back. Also obtain details to inform mustering personnel of the emergency conditions.

4. When mustering is completed:

- _____ A. The EAAC shall contact the RCC at Ext. 5444 or 8082 (or by page phone) and inform him/her:
 - The muster is complete.
 - The approximate number of personnel mustered.
 - Approximately how many are RWP trained.
- _____ B. Inform the RCC that you are preparing for evacuation and will need teams to be assigned for personnel monitoring and decontamination and vehicle monitoring and decontamination.

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Initials

- | | |
|--------------|---|
| <p>_____</p> | <p>C. The RCC should assign one team leader for the personnel monitoring and decontamination teams and one team leader for the vehicle monitoring and decontamination team.</p> <ul style="list-style-type: none"> • Assist the RCC in selecting personnel, if needed. Rad Con Techs shall be the first choice for team leaders. If Rad Con Techs are not available to be team leaders, the team leaders shall be RWP trained (unless directed otherwise by the RAC) and should have a radiological controls background if possible. • The teams and team leaders may be dispatched from the plant or selected from personnel at the Emergency Assembly Area. • The teams and team leaders should report to the RAA as early as possible, preferably well before the 1st evacuees depart the site. • If the Personnel/Vehicle Monitoring and Decontamination Teams were selected from volunteers at the warehouse, ensure that they contact the RCC (ext. 5444 or 8082 or by page phone) for specific instructions. • Provide the team leaders with Exhibit 3 and 4 of this procedure. |
| <p>_____</p> | <p>D. The EAAC shall contact the ED Assistant by phone (extension 8778, 8069) (for drills use simulator equivalent #'s 2078 or 944-4300) or by page phone and:</p> <ul style="list-style-type: none"> • Request the ED Assistant inform the Emergency Director that muster is complete. • Ask if the Emergency Director requires any assistance from mustered personnel. • As to be informed of the evacuation route and Remote Assembly Area to be used. |
| <p>_____</p> | <p>E. Muster sheets shall be given to the SPO (or designated individual). Contact Security at Ext. 8040 or 8038 if the SPO has not arrived by the time muster is completed.</p> |
| <p>_____</p> | <p>F. The EAAC shall then request the SPO (or designated individual) to inform the on-shift Security Supervisor that muster is complete.</p> |

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5. When the order is given to evacuate:

- _____ A. Obtain appropriate evacuation maps (Exhibit 8) from the emergency locker and have them distributed to any employees who need them.
- _____ B. Advise employees that if they encounter representatives of the media during evacuation or at the Remote Assembly Area they should direct any questions to the Joint Information Center.
- _____ C. If the EOF has been selected as the Remote Assembly Area, confirm with the Control Room that:
 - _____ • The EOF personnel on the Emergency Support Organization Duty Roster have been activated.
 - _____ • The Group Leader Admin. Support has been notified that site evacuees will be arriving at the EOF.
- _____ D. If the Training Center has been selected as the Remote Assembly Area and the site evacuation is occurring after normal working hours, the Training Center will be locked. Contact the Site Protection Shift Supervisor and request the keys to the Training Center (including classroom keys and key card).
- _____ E. Prior to releasing the first group of evacuees, contact Site Protection to verify that Police, if needed, are on hand for traffic control during the evacuation.
- _____ F. When you are ready to begin releasing personnel, contact the Security Supervisor/Coordinator and advise him that personnel are evacuating the site and will be being released in groups of 100 or less in five minute intervals. Inform Security which bridge the evacuees will be using.
- _____ G. As the last group of evacuees is being released, contact the ED Assistant by phone (ext. 8778, 8069), (for drills use simulator equivalent #'s 2078 or 944-4300) or by page phone to inform them that all personnel from your Emergency Assembly Area have been released and that you are now securing the Emergency Assembly Area and are evacuating yourself.
- _____ H. Evacuate to the Remote Assembly Area (take this procedure and the bullhorns with you) and, upon arrival, have yourself monitored and then offer assistance to the Monitoring and Decontamination Team Leader(s).

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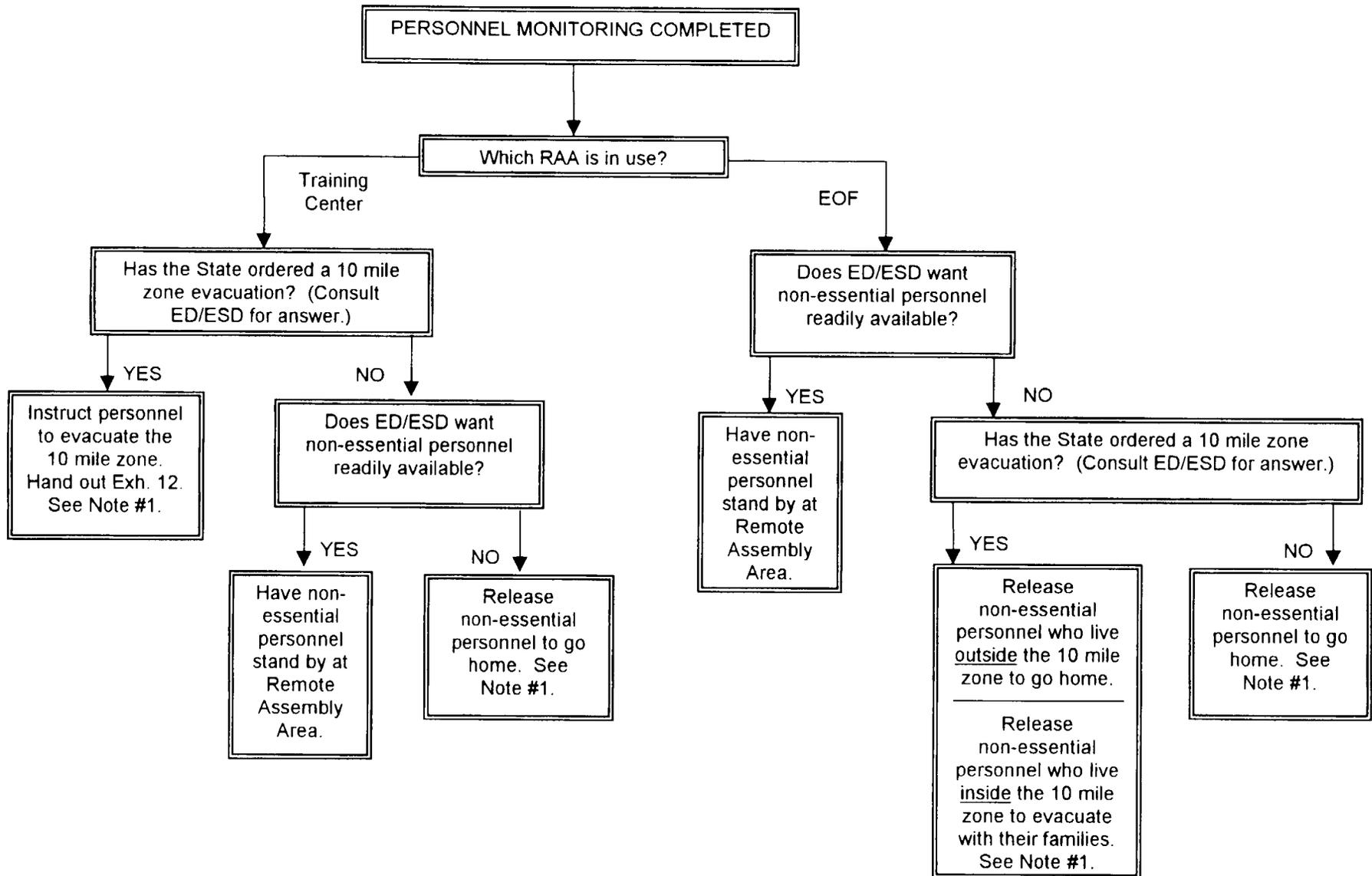
6. When monitoring is completed, refer to the logic diagram on the next page. The note below applies to the logic diagram on the next page.

NOTE 1

Non-essential personnel should report on the following workday to the Training Center if the 10 mile EPZ has not been evacuated by that time. Non-essential personnel should report to EOF on the following workday if the 10 mile EPZ is evacuated.

 Emergency Assembly Area Coordinator Date Time

EXHIBIT 1



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EXHIBIT 2

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**Radiological Controls Support for
Site Evacuation and Remote Assembly**

NOTE

Conditional steps (i.e. steps containing an "if" statement) should be marked "N/A" and skipped if the condition is not met.

The Radiological Controls Coordinator (RCC) is responsible for carrying out the actions in this exhibit. If the RCC position is not yet filled, the RAC is responsible for the actions listed in this exhibit.

Initials

- _____ 1. Upon declaration of a Site Area Emergency or the call for onsite assembly (mustering), contact the Radiological Assessment Coordinator (RAC) and request that the RAC designate the Remote Assembly Area (RAA) to be used.

- _____ 2. If a General Emergency is declared without escalating through the Site Area Emergency classification, immediate evacuation without on-site muster may be warranted. In this case, perform the following steps only if they are applicable, but ensure that steps are taken to provide for monitoring at the Remote Assembly Area.

- _____ 3. Determine the availability of Rad Controls personnel to serve as Personnel/Vehicle Monitoring and Decontamination Team members/leaders.
 - _____ 3.1 If one or more Rad Con Techs are available without detracting from in-plant response or Field Monitoring Team response:
 - A. Assign personnel, as appropriate, to be the Personnel Monitoring and Decontamination Team Leader and the Vehicle Monitoring and Decontamination Team Leader.
 - B. Assign personnel as team members, if available.
 - C. Ensure they obtain extra friskers from the Rad Inst. Shop.

 - _____ 3.2 If Rad Con Techs are not available:
 - A. Contact the EAAC and request that he/she ask for volunteers from the personnel mustering at the Emergency Assembly Area to serve as Personnel Monitoring and Decontamination Team Leader, Vehicle Monitoring and Decontamination Team Leader, and team members.
 - B. These personnel must be RWP qualified (unless directed otherwise by the RAC) and, if possible, should have a Radiological Controls background.

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- _____ 4. When the team(s) have been selected:
 - A. Brief the team leaders on their duties according to Exhibits 3 and 4. (This briefing will most likely be done over the telephone or radio).
 - B. Ensure that one team member is designated to maintain communications and recordkeeping.

- _____ 5. If possible, the teams should be sent to the Remote Assembly Area well in advance of the arrival of the first evacuees.

- _____ 6. Once the team(s) are dispatched, maintain periodic communications with them to provide direction, coordination and assistance.

Radiological Controls Coordinator	Date	Time
-----------------------------------	------	------

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EXHIBIT 3

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Personnel Monitoring and Decontamination

The Personnel Monitoring and Decontamination Team Leader is responsible for carrying out the steps in the exhibit. Steps 1 through 7 should be performed prior to the start of the evacuation, if possible. The team should be at the Remote Assembly Area before the first evacuees arrive, if possible.

NOTE

Conditional steps (i.e. steps containing an "if" statement) should be marked "N/A" and skipped if the condition is not met.

Initials

- _____ 1. Obtain a Rad Con radio from the Emer. Locker in the Processing Center, if available. If not available, telephone will be the primary means of communication at the RAA.
- _____ 2. If a radio was obtained per Step 1 above, perform an operational check of the radio with the Rad Con Coord (RCC)/GRCS.
 - 2.1 Refer to the following steps as needed for guidance in operating the portable radio:
 - A. Turn on the radio by rotating the "power on-off/volume" knob clockwise. The radio will perform a "power up self test" and then display:
 - Its unit number (for example - "TMI P 1" is portable radio #1) and
 - Either "EARS" or "CC SCAN" depending on whether the radio is receiving a signal from the system Control Channel (if "CC SCAN" appears, the radio is out of range or in a bad location - moving outdoors or to a window may remedy this).

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B. To Transmit:

- Make sure that "EARS" is displayed on the front of the radio and then press the Push-To-Talk (PTT) button (elongated button on the left side of the radio).
- A short medium pitch beep should be heard immediately. Then begin speaking.
- When speaking, hold the radio approximately 3 inches from the mouth and speak in a normal voice.
- If a high pitch beep is heard when the PTT is pressed, the system is temporarily busy. Don't release the PTT button - continue pressing it and wait for the short medium pitch beep before starting to speak. The delay should typically be no more than a few seconds.
- If several short high pitch beeps are heard while you are talking, this means that you are nearing to the radio's 60 second transmission time limit. Quickly un-key the radio to avoid being cut off. Long messages should be broken into several shorter messages so that information is not missed.

_____ 3. If a vehicle is not available, request one from the RCC.

_____ 4. Obtain friskers (RM-14's and E140N's) from the Rad. Inst. Shop.

- a. Numerous instruments will allow faster monitoring of the evacuees.
- b. Get as many friskers as are calibrated and ready for issue (source checks may be waived).
- c. At the Remote Assembly Area, the Vehicle Monitoring and Decontamination Team will need several friskers in order to perform their function.

NOTE

The remainder of the equipment needed for personnel monitoring and decontamination is stored at the Training Center RAA and at the EOF RAA (see Exhibit 9 for locations).

_____ 5. Ensure that the RCC or designee provides a briefing to the team leader (this would normally be provided over the radio or telephone).

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- _____ 6. If the Training Center is to be used as the RAA:
- a. During normal working hours - Obtain access to the needed areas/classrooms by requesting assistance from Training Department Personnel upon arrival at the RAA.
 - b. After normal working hours - Obtain keys/keycards for the Training Center (Buildings 1 and 2 and classrooms) from the Site Protection Department.
- _____ 7. Proceed with the monitoring and decontamination team to the designated RAA and report by radio or telephone to the RCC. Provide the RCC with your telephone number as listed below:

<u>RAA Location</u>	<u>RCC Phone No.</u>	<u>Your Phone No.</u>
Training Center	5444 or 8082	5811/5810 (Bldg. 2 Decon Area - 5815)
EOF	948-5444 948-8082	948-8966

NOTE

The phones in the Training Center vending area (ext. 5810/5811) have lights that flash when the phone is ringing rather than audible bells. Someone will need to be within sight of the phones to receive incoming calls.

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8. Set up the RAA as follows:

NOTE

Implement Section 8.1 or 8.2 as applicable depending on the location chosen for the Remote Assembly Area.

8.1 Training Center Set Up for Personnel Monitoring and Decon

NOTE

The following steps can be performed concurrently.

- A. Obtain the magnetic signs from the emergency locker and post them as follows (see Exhibit 9):
 - Post a magnetic "TMI Site Evacuees Enter Here" sign on the outside of the exterior door nearest the Training Center vending machine area.
 - Post a magnetic "Clean Personnel Exit - No Entry" sign outside the exterior door near Room 138.
 - Post a magnetic "Clean Personnel Exit - No Entry" outside the exterior door near the ladies room in Building 2.

- B. Set up a frisking area in the hallway of Building 1 near Room 140 as shown on Exhibit 9.
 - Place a step off pad on the floor.
 - Obtain a small table or a chair and place the frisker on it.
 - Place RAA sign-in sheets (Exhibit 13) and pens on the table.
 - Set up additional frisking areas in the hallway according to the number of friskers available.

- C. Unlock and open the necessary classrooms for use as assembly areas and holding areas for contaminated personnel awaiting decon.

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- D. Erect radiological barriers in Building 2 as shown on Exhibit 9.
- The barriers should have radiation warning signs attached to them.
 - The signs should face the outside of the area being controlled and should state:
 - "No Entry" or "Keep Out",
 - "Contamination Area" and
 - "Radioactive Materials Area".

NOTE

The barrier in the hallway leading from the Auditorium in Building 2 is particularly important as it is intended to keep members of the media from mingling with site evacuees.

- E. Take the following personnel decon supplies from the emergency locker to the decon area:
- Paper towels
 - Waterless hand cleaner
 - Wash basin
 - Bath soap
 - Shampoo
 - Scrub brushes
 - Nail clippers
 - Barber scissors
 - Nasal swabs
 - Disposable PCs
 - Masking tape
 - Poly bags
 - Frisker
 - Step off pad
 - Procedure 6610-ADM-4330.02

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8.2 EOF Set Up for Personnel Monitoring and Decon

NOTE

The following steps can be performed concurrently.

- A. Obtain the signs from the decon locker and post them as follows (see Exhibit 9):
- Post a magnetic "TMI Site Evacuees Enter Here" sign on the outside of the door to the sample storage area.
 - Tape a "Clean Personnel Exit - No Entry" sign to the outside of the EOF next to the small roll-up door by the sample storage area.
 - Place the 2 "TMI Site Evacuees - Use Garage Entrance" signs that are on safety cones at the EOF gate. Make sure the signs point toward the EOF garage entrance.
 - Post a magnetic "Clean Personnel Exit - No Entry" sign outside the door at the front of the EOF near the NRC Conference Room.
- B. Establish positive access control at the following doors (see Exhibit 9 for exact locations):
- Evacuee entrance door in the sample storage area,
 - Clean personnel exit door (roll-up door) in the sample storage area and
 - Clean personnel exit door near the NRC conference room.
- Limit access to the EOF to identifiable site personnel (i.e., those presenting a company photo badge or employees that you recognize).
- C. Set up two frisking areas as shown on Exhibit 9:
- One in the sample storage area for personnel arriving from the site and
 - One in the hallway near the Count Room for frisking personnel who have been decontaminated.
 - Place a step off pad on the floor in each location.
 - Obtain small tables or chairs on which to place friskers.
 - Place RAA sign-in sheets (Exhibit 13) and pens with the frisker in the sample storage area.

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- D. Erect radiological barriers as shown on Exhibit 9.
- Use stanchions and/or tape to support the barrier ropes.
 - The barriers should have radiation warning signs attached to them.
 - The signs should face the outside of the area being controlled and should state:
 - "No Entry" or "Keep Out",
 - "Contamination Area" and
 - "Radioactive Materials Area".

NOTE

EOF personnel will have to use the rest rooms in the JIC until personnel decontamination is completed and the hallway and men's' room are verified free of contamination.

- E. Take the following personnel decon supplies from the decon locker to the men's' room:
- Paper towels
 - Waterless hand cleaner
 - Wash basin
 - Bath soap
 - Shampoo
 - Scrub brushes
 - Nail clippers
 - Barber scissors
 - Nasal swabs
 - Disposable PCs
 - Masking tape
 - Poly bags
 - Frisker
 - Step off pad
 - Procedure 6610-ADM-4330.02

- ___ 9. Assign individuals as personnel monitors and instruct them to begin monitoring evacuees.
- ___ 10. Instruct personnel monitors to ensure that each evacuee signs in on the RAA sign-in sheet (Exhibit 13).
- ___ 11. Direct a team member to complete an Exhibit 10 for each person found to be contaminated. Contamination is defined as having a reading on the skin or clothing of greater than 100 cpm above background at 1/2 inch measured with a frisker.

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- _____ 12. Personnel decontamination can be performed at the Training Center using the showers and sinks in the rest rooms in Building 2 (Simulator Bldg.).

 Personnel decontamination can be performed at the EOF using the shower and sinks in the men's rest room.
 - Waste water from personnel decontamination can be disposed of down the normal sink and shower drains with no special precautions.
- _____ 13. Personnel decontamination should be performed using the methods described in Procedure 6610-ADM-4330.02, Personnel Contamination Monitoring and Decontamination.
- _____ 14. Results of decontamination efforts should be recorded on Exhibit 10.
- _____ 15. The RCC should be informed of the number of persons found to be contaminated and the results of decontamination efforts.
- _____ 16. Background should be checked periodically to ensure that radiological conditions are not changing.
- _____ 17. Perform and document a thorough survey of the personnel monitoring and decontamination areas when monitoring and decontamination are completed. Release all clean areas for unrestricted use. Post any contaminated areas that cannot be decontaminated. Report the results to the RCC.
- _____ 18. Retain all personnel monitoring and decontamination records for later turn in to the RCC.

 Personnel Monitoring and Decontamination Team Leader

 Date

 Time

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EXHIBIT 4

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Vehicle Monitoring and Decontamination

The vehicle Monitoring Decontamination Team Leader is responsible for carrying out the steps in this exhibit. Steps 1 through 7 should be performed prior to the start of the evacuation, if possible. The team should be at the Remote Assembly Area before the first evacuees arrive, if possible.

NOTE

Conditional steps (i.e. steps containing an "if" statement) should be marked "N/A" and skipped if the condition is not met.

Initials

- _____ 1. Obtain a Rad Con radio from the Emer. Equip. Locker in the Processing Center, if available. If not available, communication with the RCC (or RAC) will be performed using one of the telephones in the RAA.

- _____ 2. If a radio was obtained per Step 1 above perform an operational check of the radio with the Rad Con Coord (RCC)/GRCS.
 - 2.1 Refer to the following steps as needed for guidance on operating the portable radio:
 - A. Turn on the radio by rotating the "power on-off/volume" knob clockwise. The radio will perform a "power up self test" and then display:
 - Its unit number (for example - "TMI P 1" is portable radio #1) and
 - Either "EARS" or "CC SCAN" depending on whether the radio is receiving a signal from the system Control Channel (if "CC SCAN" appears, the radio is out of range or in a bad location - moving outdoors or to a window may remedy this).

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EXHIBIT 4

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B. To Transmit:

- Make sure that "EARS" is displayed on the front of the radio and then press the Push-To-Talk (PTT) button (elongated button on the left side of the radio).
- A short medium pitch beep should be heard immediately. Then begin speaking.
- When speaking, hold the radio approximately 3 inches from the mouth and speak in a normal voice.
- If a high pitch beep is heard when the PTT is pressed, the system is temporarily busy. Don't release the PTT button - continue pressing it and wait for the short medium pitch beep before starting to speak. The delay should typically be no more than a few seconds.
- If several short high pitch beeps are heard while you are talking, this means that you are nearing to the radio's 60 second transmission time limit. Quickly un-key the radio to avoid being cut off. Long messages should be broken into several shorter messages so that information is not missed.

_____ 3. If a vehicle is not available, request one from the RCC.

_____ 4. Obtain supplies for vehicle decontamination such as:

- a. Absorbent towels
- b. Detergent and
- c. Scrub brushes

These supplies can be obtained from the warehouse or other on-site location. Friskers will be obtained by the Personnel Monitoring and Decontamination Team from the Rad Inst. Shop. Obtain several friskers from that team once you arrive at the Remote Assembly Area.

_____ 5. Ensure that the RCC or designee provides a briefing to the team leader (this would normally be provided over the radio or telephone).

_____ 6. Proceed with the monitoring and decontamination team to the designated RAA and report by radio or telephone to the RCC.

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EXHIBIT 4

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- ___ 7. Choose an area for vehicle monitoring:
 - a. If the Training Center is used as the RAA, vehicles can be monitored as they enter the rear parking lot. Contaminated vehicles can be directed to one side of the lot, clean vehicles to the other side.
 - b. If the EOF is used as the RAA, evacuees should use on-street parking. The team can monitor vehicles where they are parked and make note of any contaminated vehicles.
- ___ 8. Assign individuals as vehicle monitors and instruct them to begin monitoring vehicles driven by evacuees.
- ___ 9. Direct a team member to complete an Exhibit 11 for each vehicle found to be contaminated. Contamination is defined as having a reading of greater than 100 cpm above background by direct frisk at 1/2 inch or measured by smear survey.
- ___ 10. Contaminated vehicles can be decontaminated by the following methods:
 - a. Wipe contaminated areas with absorbent towels (damp or dry).
 - b. Wash with water and detergent (with assistance from the Fire Department if needed).
 - c. Other methods as prescribed by the RCC.

Vehicles with contamination that cannot be easily removed by methods that do not produce contaminated run-off should be impounded if possible.
- ___ 11. Results of decontamination efforts should be recorded on Exhibit 11.
- ___ 12. The RCC should be informed of the number of vehicles found to be contaminated and the results of any decontamination efforts.
- ___ 13. Background should be checked periodically to ensure that radiological conditions are not changing.
- ___ 14. Perform and document a thorough survey of the vehicle monitoring and decontamination areas when monitoring and decontamination are completed. Release all clean areas for unrestricted use. Post any contaminated areas that cannot be decontaminated. Report the results to the RCC.
- ___ 15. Retain all vehicle monitoring and decontamination records for later turn in to the RCC.

Vehicle Monitoring and Decontamination Team Leader

Date

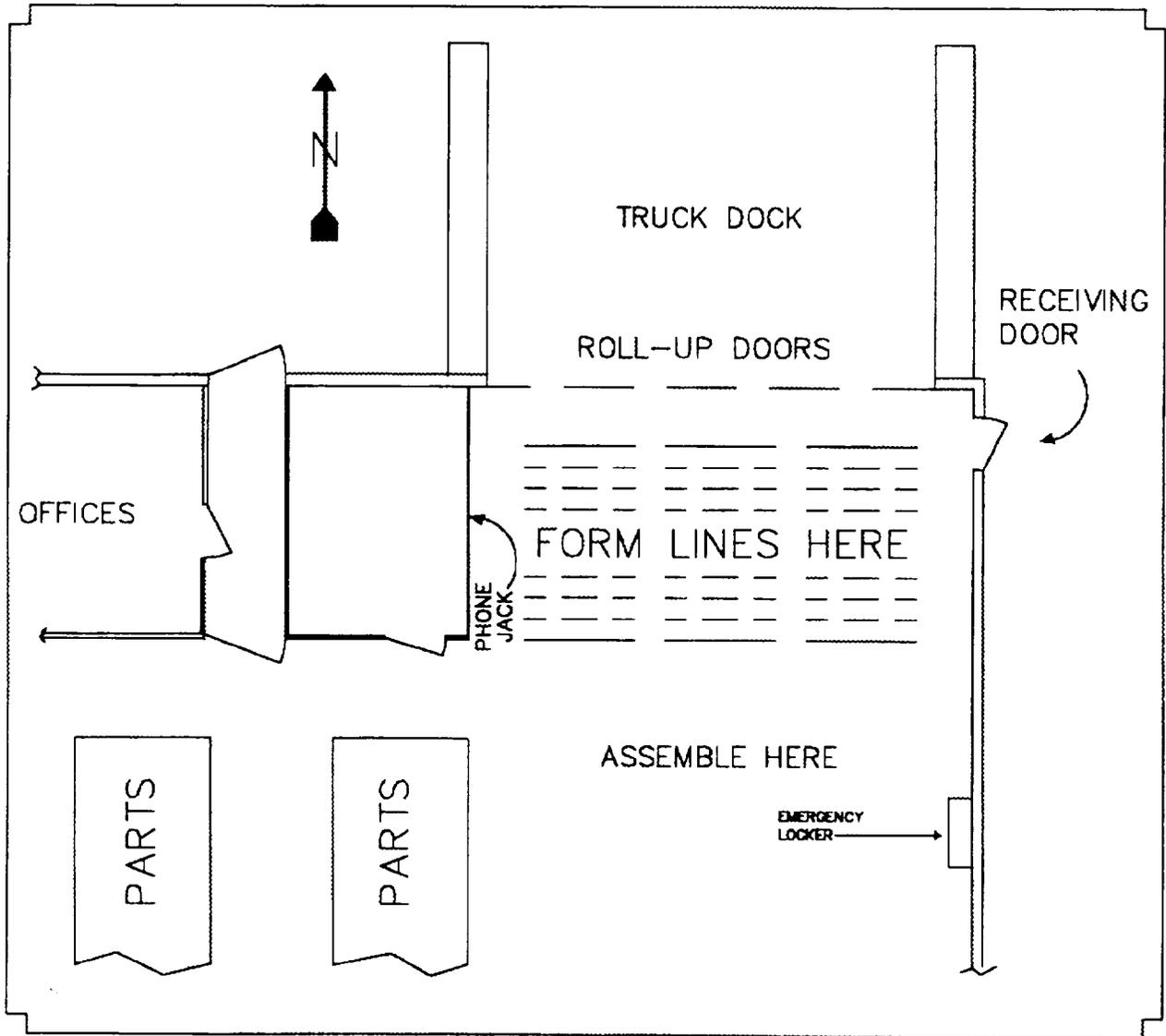
Time

	<p style="text-align: center;">TMI - Unit 1 Emergency Plan Implementing Document</p>	<p>Number EPIP-TMI-.36</p>
<p>Title Emergency Assembly and Site Evacuation</p>	<p>Revision No 13</p>	

EXHIBIT 5

Page 1 of 2

**Emergency Assembly Area Floor Plan
Warehouse 1 (Northeast Corner)**

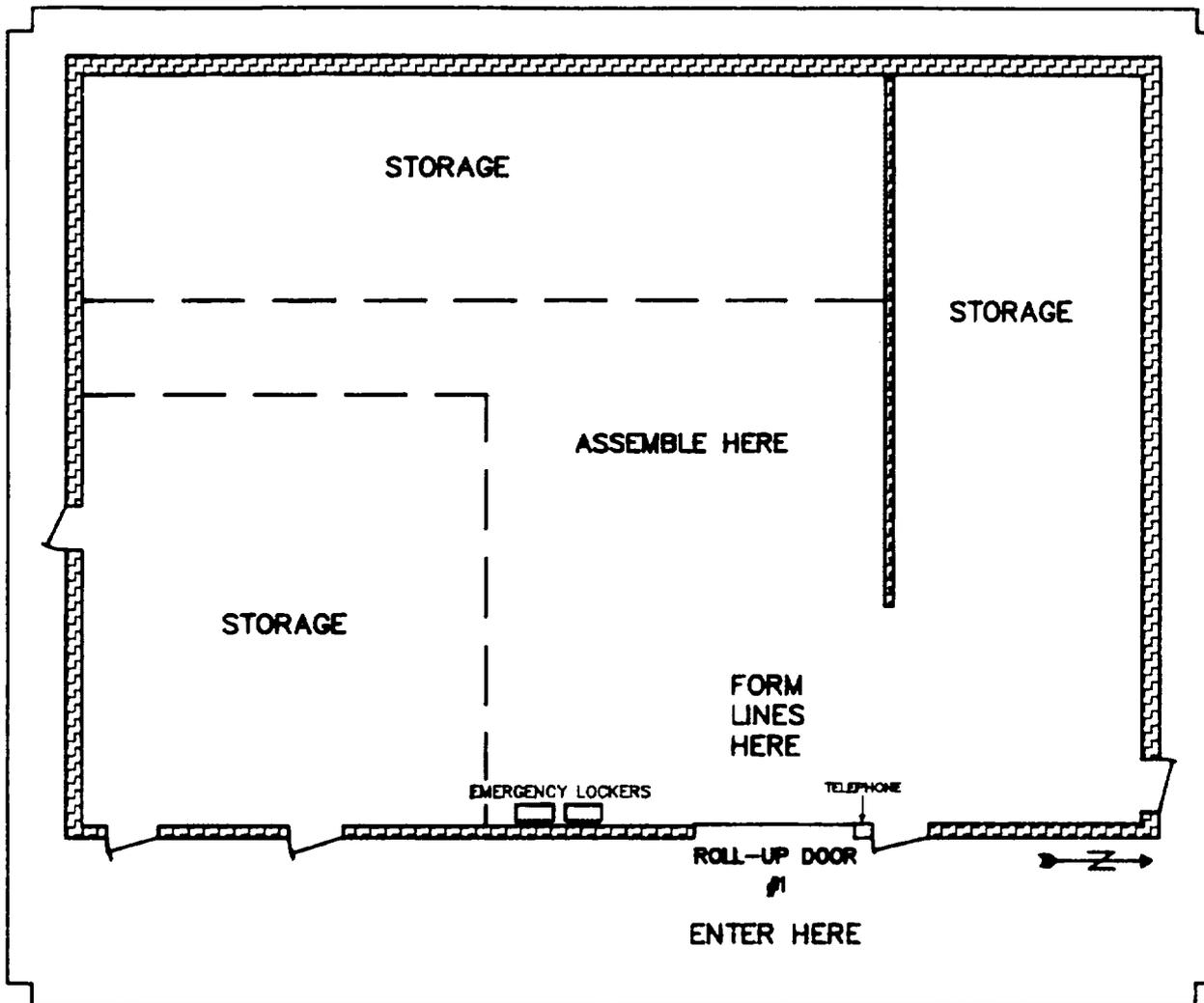


	<p style="text-align: center;">TMI - Unit 1 Emergency Plan Implementing Document</p>	<p>Number EPIP-TMI-36</p>
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EXHIBIT 5

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Emergency Assembly Area Floor Plan
Warehouse 3



TMI - Unit 1
Emergency Plan
Implementing Document

Number

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Title

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13

EXHIBIT 6

Page 1 of 1

WAREHOUSE MUSTER SHEET

	NAME	BADGE NO.	RWP TRAINED	
			Yes	No
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
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25				

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EXHIBIT 7

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ADDITIONAL INSTRUCTIONS FOR NOTIFYING SITE PERSONNEL

Obtain a vehicle and bullhorn (bullhorns are stored in the warehouse emergency locker) and make a "sweep" of the trailer complexes, buildings and outlying areas using the map on Exhibit 7 Page 2 of 2 and ensure notification of personnel who may not have heard the plant page announcement(s). Ensure personnel in purchasing area of Warehouse 1 are notified.

A. For a Site Area Emergency read the following message (using the bullhorn):

"Attention all personnel, attention all personnel - a Site Area Emergency has been declared at TMI. All emergency personnel report to your stations. All non-essential personnel report to the Warehouse 1/ Warehouse 3 via:
Circle One

_____ "

(repeat the route to the warehouse announced over the plant page)

(Repeat the message as required)

B. For a General Emergency read the following message (using the bullhorn):

"Attention all personnel, attention all personnel - a General Emergency has been declared at TMI. All emergency personnel report to your stations. All non-essential personnel evacuate the site by personal vehicle via:

_____ to:

(repeat the evacuation route announced over the plant page)

The _____ Training Center / EOF
Circle One (per plant page announcement)

(Repeat the message as required)

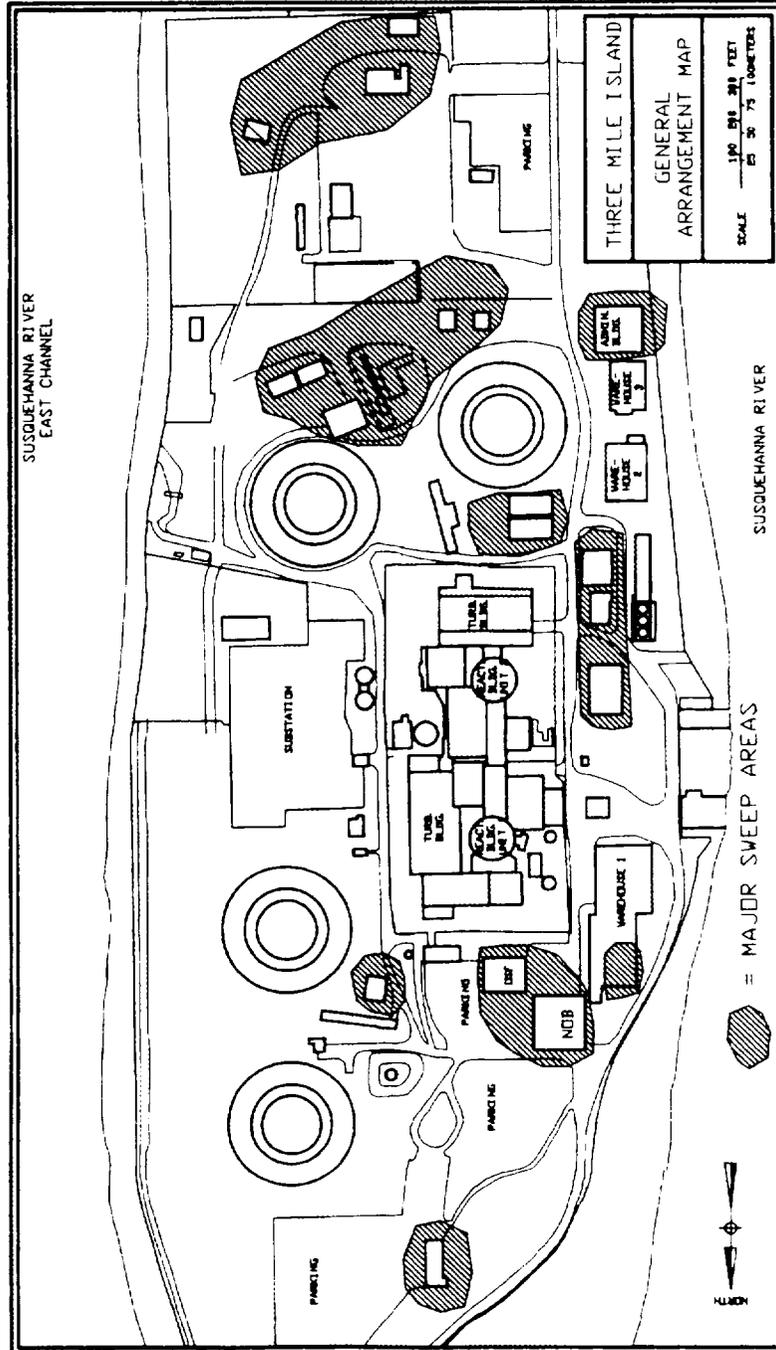
If needed, instruct personnel working at the Red Hill Dam construction site on the southeast side of TMI to evacuate the site. Determine from the Emergency Assembly Area Coordinator which gate these personnel should use.

NOTE

If an Alert was declared earlier the Red Hill Dam construction personnel should have evacuated already. If the Site Area or General Emergency was the initial declaration they will need to evacuate immediately.

EXHIBIT 7

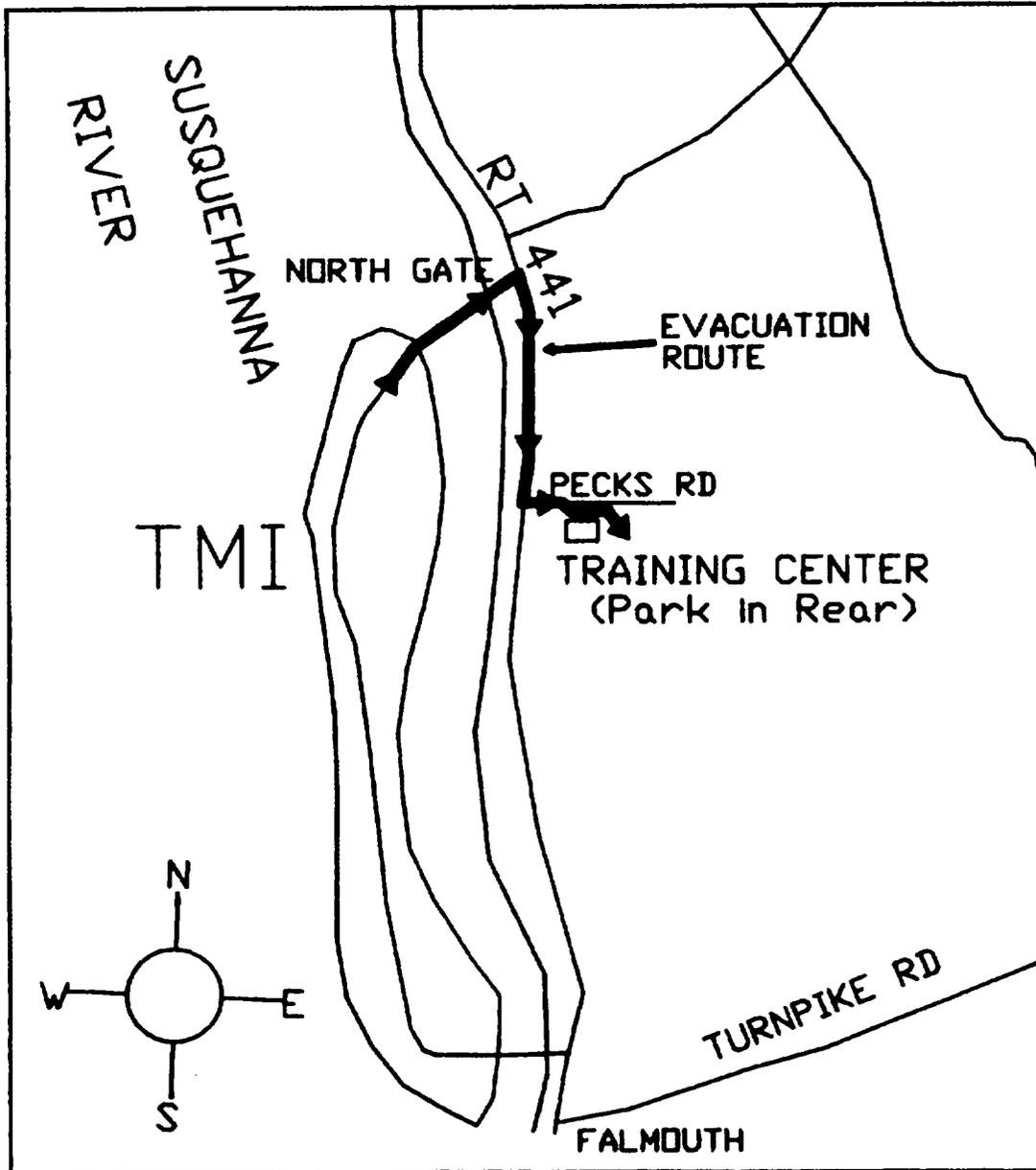
Additional Instructions for Notifying Site Personnel



	<p style="text-align: center;">TMI - Unit 1 Emergency Plan Implementing Document</p>	<p>Number EPIP-TMI-.36</p>
<p>Title Emergency Assembly and Site Evacuation</p>	<p>Revision No. 13</p>	

EXHIBIT 8

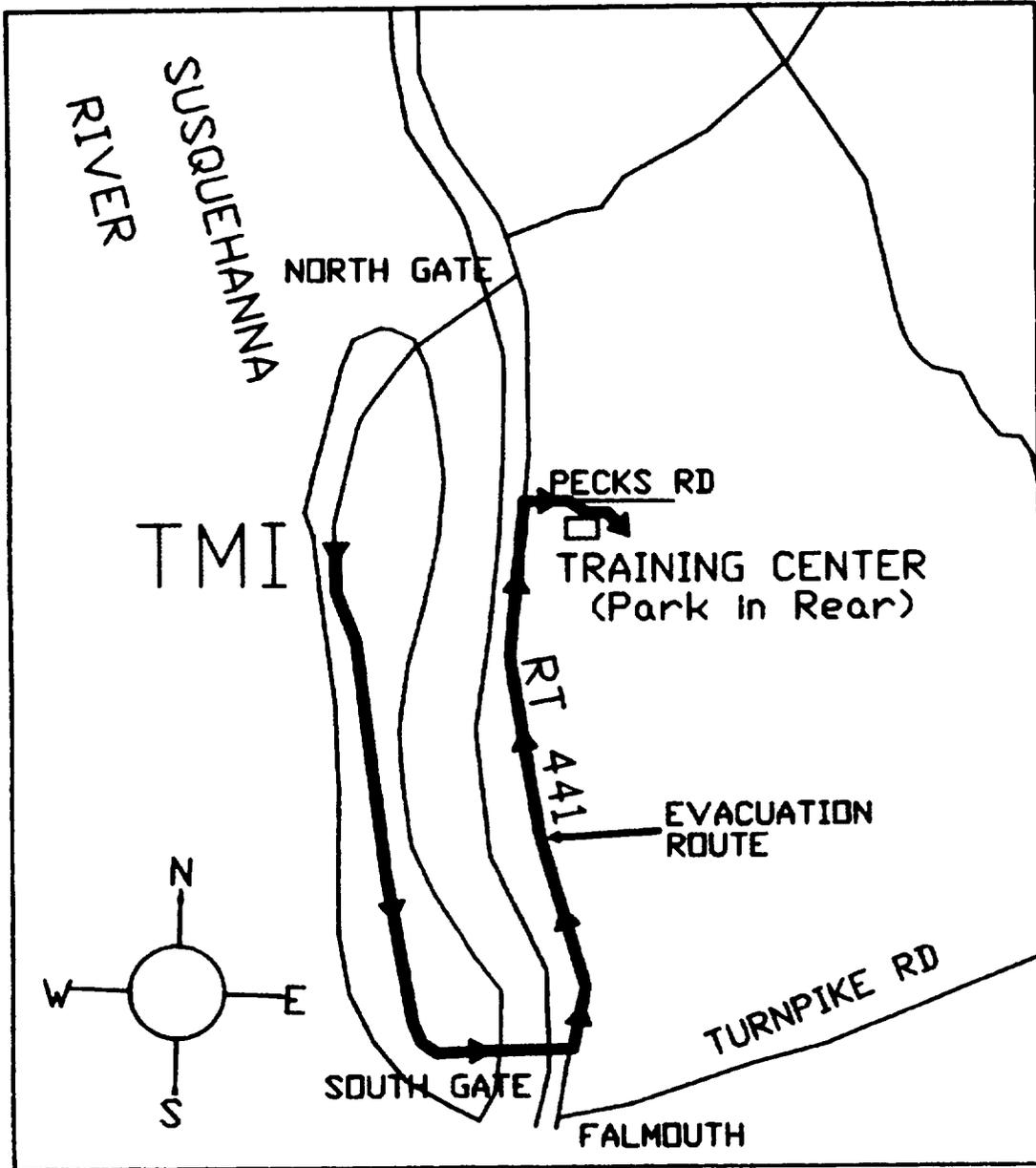
**Site Evacuation Route Map
Via North Gate to Training Center**



If you encounter members of the Media during evacuation, please direct their questions to the Joint Information Center.

EXHIBIT 8

Site Evacuation Route Map
Via South Gate to Training Center



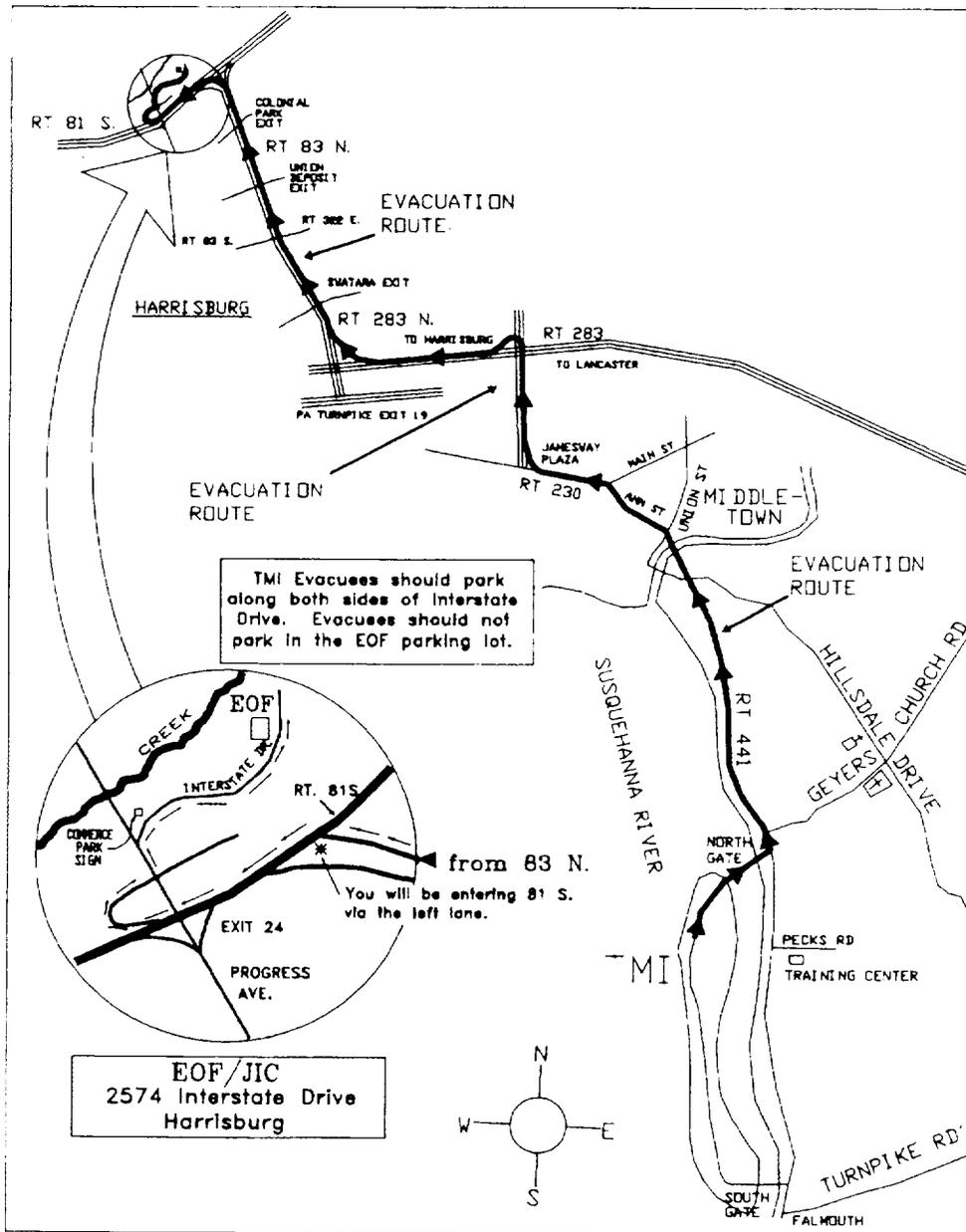
If you encounter members of the Media during evacuation, please direct their questions to the Joint Information Center.

	<p>TMI - Unit 1 Emergency Plan Implementing Document</p>	<p>Number EPIP-TMI-36</p>
<p>Title Emergency Assembly and Site Evacuation</p>		<p>Revision No. 13</p>

EXHIBIT 8

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Site Evacuation Route Map
Via North Gate to EOF



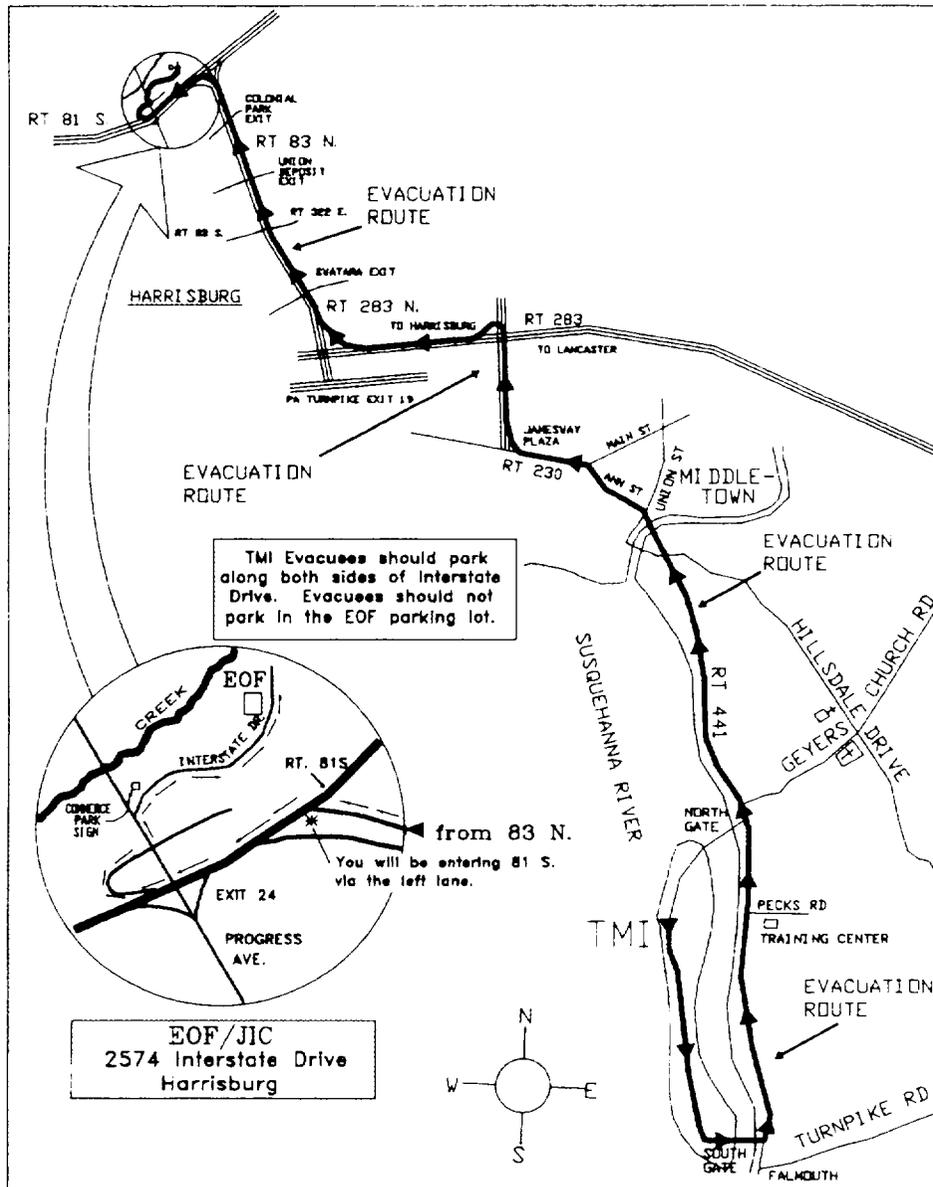
If you encounter members of the Media during evacuation, please direct their questions to the Joint Information Center.

	<p style="text-align: center;">TMI - Unit 1 Emergency Plan Implementing Document</p>	<p style="text-align: center;">Number EPIP-TMI-.36</p>
<p>Title</p> <p>Emergency Assembly and Site Evacuation</p>		<p>Revision No.</p> <p style="text-align: center;">13</p>

EXHIBIT 8

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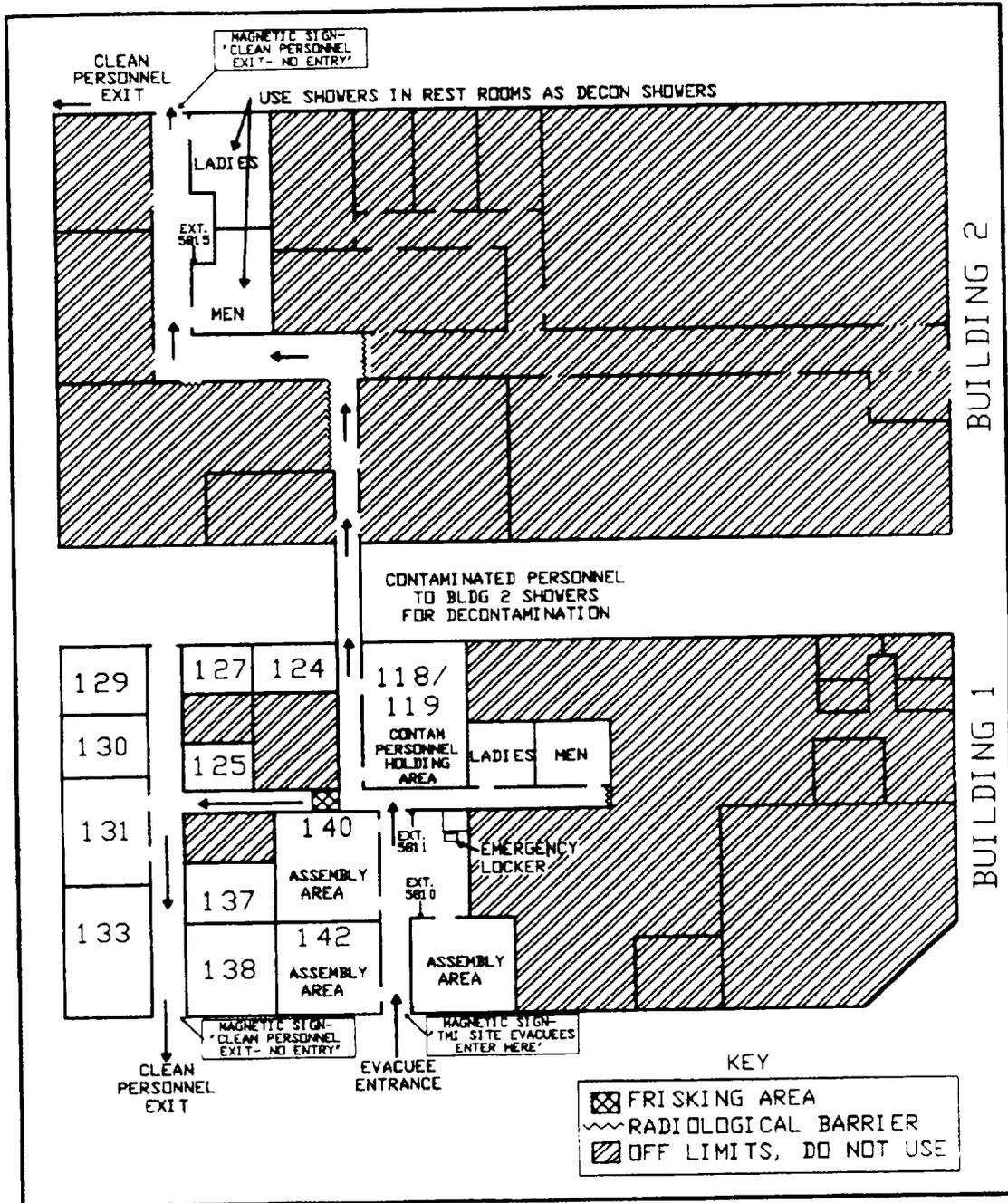
**Site Evacuation Route Map
Via South Gate to EOF**



If you encounter members of the Media during evacuation, please direct their questions to the Joint Information Center.

EXHIBIT 9

Training Center Floor Plan



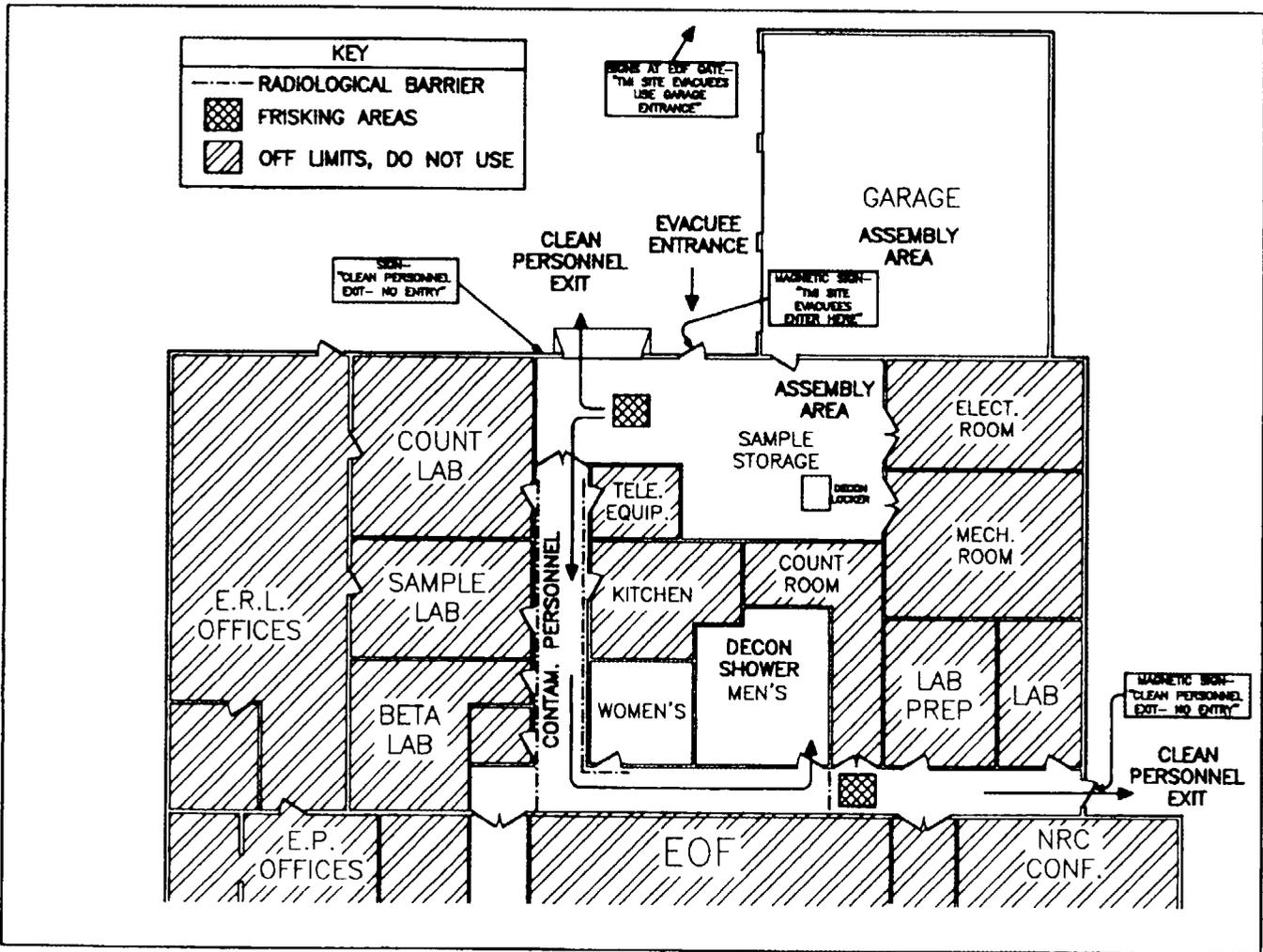


EXHIBIT 10

EXAMPLE PERSONNEL CONTAMINATION REPORT FORM

Personnel Skin Contamination Report No. _____					
Name		Time of Contamination		CAP/AR No.	
Dept		Supervisor		Date	
		Ext.		SS No.	
				COMEC No.	
				RWP No.	
				Isotope-c No.	
Plant Location:					
Protective Clothing Worn:					
Job/Task Description:					
Apparent Cause(s) (see reverse): Cause Code Pri. ___/Sec. ___					
Corrective Recommendations (if applicable):					
Survey Data/Interview					
By _____		Date _____		Inst. _____	
Name (Print/Signature):				Cal. Due _____	
				S.N. _____	
				Bkg. _____	
				cpm	
Method of Decon.					
Medical Rep. Notified: _____					
<input type="checkbox"/> 1. Tape <input type="checkbox"/> 2. Soap and Water <input type="checkbox"/> 3. Detergent		<input type="checkbox"/> 4. Decay <input type="checkbox"/> 5. Other _____		<input type="checkbox"/> 6. Other _____	
Medical Representative _____					
Specify Level (NCPM unless specified), Time and Decon Method (from above) for each attempt					
Area	Size (cm ²)	Predecon. Time	Decon 1/Time/Method	Decon 2/Time/Method	Decon 3/Time/Method
1					
2					
3					
4					
5					
* Contaminations above the shoulders require nasal biow/smears and possible WBC					
Location of contamination is designated numerically below. Use supplemental sheets if necessary.			I have been informed of the results of my decontamination and any questions concerning this matter have been explained to me.		
			Signature _____ Date _____		
			Whole Body Count Results (Isotopes, Activity - nCi, File Nos.)		
			WBC Operator _____ Results _____		
			Reviewed By:		
			GRCS (Print/Signature): _____ Date _____		
			Rad. Con. Management _____ Date _____		
			Rad Engineering/Dosimetry _____ Date _____		
			Skin/Extremity dose assessed _____ mrem		

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EXHIBIT 12

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INSTRUCTIONS FOR EVACUATING TO WILLIAMS VALLEY HIGH SCHOOL

(From the Training Center)

1. Proceed north on Rt. 441 to Geyers Church Road, turn right.
2. Follow Geyers Church Road to Rt. 230, turn right.
3. Turn left at the connector road to Rt. 283, follow the signs to Rt. 283 East.
4. Follow Rt. 283 East to Rt. 743.
5. Take Rt. 743 North to Interstate 81.
6. Take Interstate 81 North to Rt. 209 South (Exit 33).
7. Take Rt. 209 South to the Reception Center at Williams Valley High School, Williamstown, PA.

EXHIBIT 13
RAA Sign-In Sheet

	NAME	BADGE #
1		
2		
3		
4		
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7		
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FOR INFORMATION ONLY

AmerGen	TMI Emergency Plan Implementing Procedure	Number EPIP-TMI-.44
Title Thyroid Blocking		Revision No. 2
Applicability/Scope All Personnel involved in Emergency or Recovery Related Activities at TMI		Effective Date OCT 20 2000
This document is within QA plan scope <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Safety Reviews Required <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		USAGE LEVEL 2

List of Effective Pages

<u>Page</u>	<u>Revision</u>	<u>Page</u>	<u>Revision</u>	<u>Page</u>	<u>Revision</u>	<u>Page</u>	<u>Revision</u>
1	2						
2	2						
3	2						
4	2						
5	2						
6	2						
7	2						

	Signature	Date
Originator	S. R. Finicle <i>SR Finicle</i>	<i>9/25/00</i>
Procedure Owner	/s/ S. R. Finicle	9/11/00
PRG	/s/ E. R. Frederick for J. S. Schork	9/13/00
Approver	/s/ N. Brown	9/20/00

	TMI Emergency Plan Implementing Procedure	Number EPIP-TMI-.44
Title Thyroid Blocking	Revision No. 2	

1.0 **PURPOSE**

The purpose of this procedure is to provide guidance to site personnel for the administration of potassium iodide tablets as a thyroid blocking agent in the event of actual inhalation or ingestion by site personnel of large quantities of radioiodine.

2.0 **APPLICABILITY/SCOPE**

This procedure applies to all personnel involved in emergency or recovery related activities at TMI.

3.0 **DEFINITIONS**

- a. Radioiodine - Any of the radioactive isotopes of iodine.

4.0 **RESPONSIBILITIES**

- a. Radiological Assessment Coordinator (RAC) is responsible for completing Exhibit 1.
- b. Medical Representative is responsible for completing Exhibits 2 and 3.

5.0 **PROCEDURE**

5.1 Implementation Criteria

- a. This procedure is to be initiated by the RAC if he/she anticipates that person(s) will be exposed to quantities of radioiodide sufficient to cause a thyroid committed dose equivalent (CDE) of greater than or equal to (25 REM).

6.0 **REFERENCES**

- a. TMI Emergency Plan (AP 1092)

7.0 **EXHIBITS**

- 7.1 Exhibit 1 - Radiological Assessment Coordinator Checklist
- 7.2 Exhibit 2 - Medical Representative Checklist
- 7.3 Exhibit 3 - Thyroid Blocking Agent Administration Form
- 7.4 Exhibit 4 - Thyroid Blocking Agent Precautions

	TMI Emergency Plan Implementing Procedure	Number EPIP-TMI-44
Title Thyroid Blocking	Revision No. 2	

EXHIBIT 1

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Radiological Assessment Coordinator Checklist

Initials

- _____ 1.0 Determine if one or more individuals have received or are expected to receive an uptake of radioiodine resulting in a thyroid committed dose equivalent (CDE) of greater than or equal to (25 REM). Consult with the Medical Representative on the benefits of administering stable iodine (KI).

NOTE

The Thyroid Dose to an individual may be determined as follows:

- A. Using an air sample, the thyroid dose is calculated as 25 mrem per DAC-hr.
- B. Having the individual get a whole body count if the whole body counter is available. The whole body counter software will calculate the thyroid dose.
- C. In the case of field monitoring teams, a dose projection or field sample may be used.

NOTE

With the exception of field monitoring teams, potassium iodide is not to be used in lieu of proper respiratory protection (i.e., as a prophylactic). Potassium iodide is only to be used to block the thyroid gland shortly after accidental or unavoidable inhalation or ingestion of radioiodine.

- _____ 2.0 If the decision is to administer stable iodine, (KI) have the exposed individual(s) and the Medical Representative assemble in the OSC.

NOTE

Field monitoring teams self-administer KI in the field and, therefore, need not assemble.

- _____ 3.0 Arrange for a bioassay to be performed on each exposed individual of concern after issuance or refusal of the thyroid blocking agent.

	TMI Emergency Plan Implementing Procedure	Number EPIP-TMI-.44
Title Thyroid Blocking	Revision No. 2	

EXHIBIT 2

Page 1 of 1

Medical Representative Checklist

Initials

- _____ 1.0 Upon assembling the exposed individual(s), direct the exposed individual(s) to read the thyroid blocking agent precaution leaflet (Exhibit 4) and sign the Thyroid Blocking Agent Administration Form (Exhibit 3). This signature verifies that the individual has read and understands the leaflet, understands that taking thyroid blocking agent is voluntary, and has no known allergy to Iodine. All exposed individuals will be offered thyroid blocking agent whether or not they refuse to sign Exhibit 3.
- _____ 2.0 Issue one sealed container of thyroid blocking agent (14 tablets potassium iodide) to each individual and instruct them to follow the label instructions. Label instructions may be altered only by a qualified Physician.

NOTE
Thyroid blocking agent is stored in the Operations Support Center
Emergency Locker.

- _____ 3.0 Verify by signature on Exhibit 3 that thyroid blocking agent was issued to the exposed individual or if he/she declined, note that on Exhibit 3 (if possible, record reason for declining on reverse side of form).
- _____ 4.0 Keep all completed Administration Forms (Exhibit 3) in the persons medical file.

	TMI Emergency Plan Implementing Procedure	Number EPIP-TMI-.44
Title Thyroid Blocking	Revision No. 2	

EXHIBIT 3

Page 1 of 2

THYROID BLOCKING AGENT ADMINISTRATION FORM

Name of Exposed Individual _____
LAST
FIRST
MIDDLE

Social Security Number _____ - _____ - _____

Badge Number _____

TLD Number _____

Duration of Exposure _____ Hours

Iodine DAC Fraction _____

Estimated DAC-hrs _____ DAC-hrs

Estimated Thyroid Dose _____ mrem (i.e., DAC-hr x 25)

Date of Exposure _____

Time Exposure Ended _____

RWP Number (if applicable) _____

Respiratory Protection worn during Exposure _____

NOTE

Obtain exposure information from the Rad Con Coordinator.

NOTE

Although 10 CFR 20 allows up to 50 Rem per year, EPA and FDA guidance recommend considering the use of KI for acute exposures of 25 Rem or greater (CDE) to the adult thyroid in order to maintain exposures As Low As Reasonably Achievable.

I verify that I have read and understand the precaution leaflet and understand that taking thyroid blocking agent is voluntary. I also verify that I have no known allergy to Iodine. I accept/decline (circle one) thyroid blocking agent.

_____/_____
 *Signature of Exposed Individual Date

Potassium Iodide tablets issued by:

_____/_____/_____
 *Signature of Medical Representative Date Time

	TMI Emergency Plan Implementing Procedure	Number EPIP-TMI-.44
Title Thyroid Blocking	Revision No. 2	

EXHIBIT 3

Whole Body Count Scheduled at: _____ / _____
Time Date

Whole Body Count Completed at: _____ / _____ / _____
Time Date Signature of WB Count Tech

* If the exposed individual refuses to sign but desires to take the thyroid blocking agent, issue the thyroid blocking agent and note the refusal to sign in the signature block.

	TMI Emergency Plan Implementing Procedure	Number EGIP-TMI-44
Thyroid Blocking	Revision No. 2	

EXHIBIT 4

Page 1 of 1

THYROID BLOCKING AGENT PRECAUTIONS

HOW POTASSIUM IODIDE WORKS

Certain forms of iodine help your thyroid gland work right. Most people get the iodine they need from foods, like iodized salt or fish. The thyroid can "store" or hold only a certain amount of iodine.

In a radiation emergency, radioactive iodine may be released in the air. This material may be breathed or swallowed. It may enter the thyroid gland and damage it. The damage would probably not show itself for years. Children are most likely to have thyroid damage.

If you take potassium iodide, it will fill-up your thyroid gland with non-radioactive iodine. This reduces the chance that radioactive iodine will enter the thyroid gland.

WHO SHOULD NOT TAKE POTASSIUM IODIDE

The only people who should not take potassium iodide are people who know they are allergic to iodide. You may take potassium iodide even if you are taking medicines for a thyroid problem (for example, a thyroid hormone or anti-thyroid drug). Pregnant and nursing women and babies and children may also take this drug.

HOW AND WHEN TO TAKE POTASSIUM IODIDE

Potassium Iodide should be taken as soon as possible after medical personnel tell you. You should take one dose every 24 hours. More will not help you because the thyroid can "hold" only limited amounts of iodine. Larger doses will increase the risk of side effects. You will probably be told not to take the drug for more than 10 days.

SIDE EFFECTS

Usually, side effects of potassium iodide happen when people take higher doses for a long time. You should be careful not to take more than the recommended dose or take it for longer than you are told. Side effects are unlikely because of the low drug dose and the short time you will be taking the drug.

Possible side effects include skin rashes, swelling of the salivary glands, and "iodism" (metallic taste, burning mouth and throat, sore teeth and gums, symptoms of a head cold, and sometimes stomach upset and diarrhea).

A few people could have an allergic reaction with more serious symptoms. These could be fever and joint pains, or swelling of parts of the face and body at times severe shortness of breath requiring immediate medical attention.

Taking iodide may rarely cause overactivity of the thyroid gland, underactivity of the thyroid gland, or enlargement of the thyroid gland (goiter).

WHAT TO DO IF SIDE EFFECTS OCCUR

If the side effects are severe or if you have an allergic reaction, stop taking potassium iodide and contact the medical department.

FOR INFORMATION ONLY

AmerGen

TMI Emergency Plan
Implementing Document

Number

EPIP-TMI-45

Title

Classified Emergency Termination Recovery

Revision No.

2

Applicability/Scope

USAGE LEVEL

Effective Date

TMI Division

2

OCT 20 2000

This document is within QA plan scope
Safety Reviews Required

<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No

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	Signature	Date
Originator	S. R. Finicle <i>S. R. Finicle</i>	9/25/00
Procedure Owner	/s/ S. R. Finicle	8/31/00
PRG	/s/ E. R. Frederick	9/12/00
Approver	/s/ N. Brown	9/25/00

	TMI Emergency Plan Implementing Document	Number ETIP-TMI-45
Title	Revision No. 2	
Classified Emergency Termination Recovery		

1.0 **PURPOSE**

This procedure provides guidance for emergency termination/recovery at the TMI Nuclear Station.

2.0 **APPLICABILITY/SCOPE**

This procedure is applicable for Emergency Plan Implementation of emergency classifications at the Alert or higher levels.

3.0 **DEFINITIONS**

a. None

4.0 **RESPONSIBILITIES**

The Emergency Director/Emergency Support Director is responsible for completion of actions required by Exhibit 1.

5.0 **PROCEDURE**

5.1 Complete Exhibit 1

6.0 **REFERENCES**

a. Three Mile Island Emergency Plan (AP 1092)

7.0 **EXHIBITS**

7.1 Exhibit 1, Classified Emergency Termination/Recovery Checklist

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EXHIBIT 1

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Classified Emergency Termination/Recovery Checklist

NOTE

The recovery phase of an emergency is intended to be instituted if long term corrective actions are needed to return the plant to near normal or decommissioning conditions. It would be expected that this would be necessary only subsequent to an incident characterized by a General Emergency or a Site Area Emergency. If the plant can be returned to normal conditions without major repairs, there is no need to enter the "Recovery Mode". In this case, the emergency may be terminated by following the criteria in this checklist.

NOTE

The following steps are provided in an order likely to result in the most efficient response. However, due to the dynamic and unpredictable nature of emergencies associated with a nuclear power facility, the order of performing the steps may be modified to cope with existing conditions. Modifying the specific order of performance of these steps will have no adverse consequences.

- 1.0 Determine when to enter recovery, de-escalate or terminate (closeout) a classified emergency based on the following conditions.

NOTE

If a General Emergency has been declared, the only option is to meet the recovery criteria. De-escalation or termination is **NOT** permitted from a General Emergency.

- 1.1 Enter recovery if all of the following conditions have been met.
- a. Radiation levels in all in-plant areas are stable or decreasing.
 - b. Radiological releases to the environment are under control or have ceased.
 - c. Containment pressure is normal (< ESAS setpoint 4 lbs).
 - d. The reactor is stable and in a safe shutdown condition.
 - e. Any fire, flood or similar emergency conditions affecting the plant are controlled or have ceased.
- 1.2 If **NOT** in a General Emergency, de-escalate the emergency if lower emergency action level criteria apply. (See Step 2.2)

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EXHIBIT 1

1.3 If **NOT** in a General Emergency, terminate (close out) the emergency based on the following criteria.

- a. The plant is in a stable configuration and
- b. **NO** emergency action level criteria apply. (See Step 2.3)

2.0 Based on the evaluation for recovery, de-escalation or termination perform the following.

Initial

2.1 If the **RECOVERY** criteria have been met.

- _____ a. Discuss recovery plans with the
 - _____ ♦ NRC and
 - _____ ♦ State
- _____ b. Discuss recovery plans with the "Chief Nuclear Officer".
- _____ c. Establish a Recovery Organization, taking into account the condition and concerns at the plant.
- _____ d. Ensure that significant efforts being performed by the Emergency Organization are transferred to the Recovery Organization.
- _____ e. Declare recovery and direct the following
 - _____ ♦ Onsite page announcements
 - _____ ♦ Offsite notifications
 - _____ ♦ Issuance of a press release.

2.2 **DE-ESCALATION** of the emergency

- _____ a. If **NOT** in a General Emergency, re-classify the emergency to a lower level.
- _____ b. Discuss de-escalation with the STATE.

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EXHIBIT 1

c. Direct the following

- _____ ♦ Onsite page announcement
- _____ ♦ Offsite notifications
- _____ ♦ Issuance of a press release.
- _____ ♦ Manning of all applicable facilities for the emergency classification per the Emergency Plan.

2.3 TERMINATION (Close Out) of the Emergency

a. Discuss termination with the STATE.

b. Direct the following

Initial

- _____ ♦ Termination (close out)
- _____ ♦ Onsite page announcement
- _____ ♦ Offsite notifications
- _____ ♦ Issuance of a press release.

FOR INFORMATION ONLY

AmerGen

TMI Emergency Preparedness
Implementing Document

Number

TEP-ADM-1300.04

Title
**Administration of the TMI Initial Response and
Emergency Support Organization Duty Roster**

Revision No.

6

Applicability/Scope All TMI Personnel responsible for
issuing and implementing the Initial Response Emergency
Organization and Emergency Support Duty Rosters

USAGE LEVEL

Effective Date

3

OCT 20 2000

This document is within QA plan scope
Safety Reviews Required

<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No

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	Signature	Date
Originator	S. R. Finicle <i>S R Finicle</i>	<i>10/9/2000</i>
Procedure Owner	/s/ S. R. Finicle	09/12/00
PRG	/s/ E. R. Frederick	09/13/00
Approver	/s/ N. Brown	10/03/00

Number

TMI Emergency Preparedness
Implementing Document**TEP-ADM-1300.04**

Title

**Administration of the TMI Initial Response and
Emergency Support Organization Duty Roster**

Revision No.

6DOCUMENT HISTORY

REVISION	EFFECTIVE DATE	DESCRIPTION OF CHANGE	PREPARED BY: REVIEWED BY: APPROVED BY:
1	03/29/96	Deleted the requirement for ESO personnel to fill out paperwork when taking the duty for someone else. The new automated ESO duty roster eliminates this requirement. This change will also serve as the annual review in accordance with 1000-PLN-1300.01, Section 8.3.	
2	09/11/96	Clarification added to address who maintains IREO duty roster, and what actions are to be taken if changes to the roster occur after 1500 hours of the same day.	
3	09/10/98	Change weekly duty roster coverage to start and stop on Tuesdays to be compatible with 10 hour work schedule.	
4	02/10/99	Revise procedure to be consistent with the new TMI and AmerGen Organization. Added additional guidance to include formalized process of what information new duty roster personnel will receive regarding responsibilities, expectations and limitations.	S.R. Finicle J.N. Grisewood
5	07/21/00	Changed Director, O and M, to Plant Manager, Shift Supervisor to Shift Manager and Duty Section Superintendent to Duty Emergency Director. Added procedure numbers to referenced procedures.	S.R. Finicle
6	OCT 20 2000	Revise procedure numbering to be consistent with 1001G. Added additional guidance to Section 4.1d and Exhibit 1 which identifies who duty roster changes should be submitted to.	

1.0 PURPOSE

The purpose of this procedure is to establish the administration and maintenance of the TMI Initial Response Emergency Organization and Emergency Support Organization Duty Roster.

2.0 APPLICABILITY/SCOPE

This procedure establishes responsibilities of the Plant Manager, TMI Emergency Preparedness Manager, Duty Emergency Director, Shift Manager and selected managers and department heads for issuing and implementing the Emergency Duty Roster for both Initial Response Emergency Organization and Emergency Support Organizations.

3.0 DEFINITIONS

- a. None

4.0 PROCEDURE**4.1 TMI Duty Rosters**

- a. Initial Response Emergency Organization Duty Roster

The TMI Initial Response Emergency Organization Duty Section Roster has been created to ensure that a sufficient complement of personnel are available 24 hours a day to support emergency situations. The TMI Initial Response Emergency Organization Duty Roster is completed (names, phone numbers, beeper numbers etc.) by the Duty Roster Administrator or designee. The completed Roster is then submitted to and approved by the Plant Manager or a Duty Emergency Director. The approved Roster is then distributed weekly to the Duty Emergency Director and the managers/department heads of persons listed on the roster. The master copy is maintained in the Unit 1 Shift Manager's office.

- b. Emergency Support Organization Duty Roster

The TMI Emergency Support Organization Duty Roster is distributed to the duty roster members annually, with updates distributed throughout the year as necessary. A listing of names, phone numbers, pager numbers, etc. is posted in the Unit 1 Shift Manager's office.

NOTE

Duty Sections normally run from 0800 hours each Tuesday until 0800 hours the following Tuesday. The Initial Response Organization Emergency Duty Roster will be distributed by 1600 hours on the Friday prior to the Tuesday the Duty roster takes effect, and posted in the Shift Managers office by 0800 Tuesday.

- c. Minimum staffing levels and qualifications for On-shift, Initial Response, and Emergency Support Organization Duty Roster members are outlined in the Emergency Plan.

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- d. Individuals assigned to the Initial Response Emergency Organization Duty Rosters shall be responsible for submitting the name(s) of qualified replacements for approval in the event they will be unable to fulfill Duty Roster assignments. Temporary changes will be submitted to the TMI Initial Response Emergency Organization Duty Roster Administrator or designee using the Initial Response Emergency Organization Duty Roster Temporary Change Request Form (Exhibit 1).

Any changes occurring after 1500 hours of the same day must be taken to the Control Room and given to the Shift Manager to make changes or faxed to Control Room (8779) and call the Shift Manager to follow-up on receipt of change.

NOTE

Revision and distribution may be accomplished more frequently, as required by additions, deletions, or other changes to the Emergency Duty Rosters.

4.2 Maintenance of Approved Duty Rosters

- a. **TMI Initial Response Emergency Organization Duty Roster**

Individuals assigned to the Initial Response Emergency Organization Duty Roster, or, in their absence their department head, shall be responsible for submitting the name(s) of qualified replacements for approval in the event they will be unable to fulfill Initial Response Emergency Organization Duty Roster assignments. Changes will be submitted to the Duty Roster Administrator or designee no later than noon Wednesday of the week prior to the affected Section's duty. The Duty Roster master copy (maintained in the Shift Manager's office) will be updated by the Administrator of the Duty Roster or designee to reflect changes. Duty Roster changes can be either faxed or mailed with a follow-up phone call to ensure that it was received.

- b. **Emergency Support Organization Duty Roster**

Individuals assigned to the Emergency Support Organization Duty Roster, or, in their absence their department head, shall be responsible for submitting the name(s) of qualified replacements for approval in the event they will be unable to fulfill Emergency Support Organization Duty Roster assignments. Substitutions for personnel on duty are accomplished using the automated duty roster system.

- c. **Reporting Requirements**

Individuals assigned to the Initial Response and Emergency Support Organization Duty Rosters shall be responsible for being fit for duty during their designated duty period and be available to report to their assigned station in accordance with Emergency Plan requirements. However, all Emergency Support Organization duty roster personnel should respond when paged, if available and fit for duty regardless of duty status. All Duty Roster personnel assigned beepers are required to keep the beeper in the "on" position 24 hours per day. In addition, the operability of these beepers is the responsibility of the duty roster member. Duty member call-out will be conducted in accordance with EPIP-TMI-.03 "Emergency Notifications and Call Outs". The Emergency Support Organization Duty Roster master copy will be maintained by the Emergency Preparedness Manager or his designee.

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5.0 **RESPONSIBILITIES**

5.1 Plant Manager, TMI

The Plant Manager, TMI is responsible for insuring that a TMI Initial Response Emergency Organization Duty Roster is available at all times to the Unit 1 Shift Manager. He is responsible for ensuring that it is:

- a. formulated in accordance with the Emergency Plan
- b. approved by the Plant Manager, TMI or Duty Emergency Director
- c. distributed to the necessary persons
- d. maintained current in the Shift Manager's Office

5.2 Emergency Preparedness Manager

The TMI Emergency Preparedness Manager or his designee is responsible for ensuring that an Emergency Support Organization Duty Roster is available at all times to the Unit 1 Shift Manager. He is responsible for ensuring that the TMI Emergency Support Organization Duty Roster is:

- a. formulated in accordance with the Emergency Plan
- b. distributed to the necessary persons
- c. maintained current in the Shift Manager's office.

The TMI Emergency Preparedness Manager or his designee will, by December 31st of each year, issue a Duty Section Schedule for the coming year and a duty roster instruction packet to all Initial Response and Emergency Support Organization duty section members. In addition, the TMI Emergency Preparedness Manager or designee will verify annually that all applicable Emergency Support and Initial Response Emergency Organization Duty Roster personnel can report to their duty station within 60 minutes.

5.3 Duty Emergency Director

The Duty Emergency Director is responsible for ensuring that his Duty Section contains an adequate complement of personnel to support Emergency recall to the Unit, and to enable any required PRG support.

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5.4 Duty Section Personnel

Personnel assigned positions on the Initial Response and Emergency Support Organization Duty Roster are responsible for ensuring they are fit for duty during their designated duty period in accordance with the company, "Fitness for Duty Program", and available for recall within the prescribed time. The pager system is the primary method of recall, therefore it is the individual's responsibility to ensure he can be reached via his beeper. If assigned a duty section beeper, which is to be utilized by more than one individual, personnel are responsible for ensuring the beeper transfer occurs on, or shortly after 0800 on the day the new duty section assumes the duty. Upon being beeped, personnel located in the TMI area shall respond by calling the EP Pager call back line (948-8801) in the Shift Managers office and follow instructions recorded on the line. All ESO Duty Roster personnel should respond if available and fit for duty when paged regardless of duty status.

5.5 Manager/Supervisors

Each department Manager/Supervisor is responsible for ensuring that all IREO and ESO duty roster personnel (including alternates) under his cognizance are qualified in accordance with Procedure TEP-ADM-1300.02, Emergency Preparedness Training and the Training Departments Emergency Preparedness Training Program. He/she is also responsible to notify the appropriate Duty Roster Administrator of changes to the published roster(s) as soon as practical.

5.6 New Personnel

New personnel assigned to the IREO/ESO duty rosters will be provided with a copy of management's expectations for duty roster personnel, access to the Etude Tracking System and pager operating instructions and limitations.

6.0 REFERENCES

- a. "Three Mile Island Emergency Plan", AP 1092
- b. "Emergency Notifications and Call Outs", EPIP-TMI-.03
- c. "Emergency Preparedness Training Program"
- d. "Emergency Preparedness Training", TEP-ADM-1300.02
- e. "Fitness for Duty Program"

7.0 EXHIBITS

- 7.1 Exhibit 1 - Initial Response Emergency Organization Duty Roster Temporary Change Request Form

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**EXHIBIT 1
Initial Response Emergency Organization Duty Roster
Temporary Change Request Form**

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TO: TMI Operations - Initial Response Emergency Organization Duty Roster Administrator

SUBJECT: Temporary Change to Initial Response Emergency Organization Duty Roster

Section _____, From _____ To _____
(Date) (Date)

Duty Roster Position _____ Position Number _____

Alternate/Replacement _____
Name _____ Extension _____
Home No. _____ Beeper No. _____

Time/Date: _____ through _____
_____ through _____

Reason for Change: _____

Requestor _____ / _____
Signature Date
*Replacement _____ / _____
Signature Date

* By my signature I certify that I meet all the applicable qualifications delineated in the Emergency Preparedness Program for this position.

<p>NOTE</p> <p>Temporary changes will be submitted to the TMI Initial Response Emergency Organization Duty Roster Administrator or designee using the Initial Response Emergency Organization Duty Roster Temporary Change Request Form.</p>

Any changes occurring after 1500 hrs. of same day must be taken to the Control Room and given to the Shift Manager to make the changes or faxed to Control Room fax # and call the Shift Manager to follow-up on receipt of change.

Fax Nos:
SM Office 8779
Ops Office 8372